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ABSTRACT

The Youth in Transition project, a longitudinal study (which began in 1966) of a national sample of young men is described in this report. (Major objectives of the project were (1) to explore the effects of dropping out of high school, (2) to assess the degree to which educational and occupational attainments are predictable from tenth grade measures, (3) to determine the role of educational attainment in occupational attainment, as compared with the role of family background and intellectual ability, and (4) to determine the impacts of various post-high school environments and experiences on values, attitudes, and behaviors.) The results from the fifth and final data collection process and a brief overview of the results of the previous four studies are presented in the introductory chapter. In chapter 2, educational attainment is treated as an outcome variable; also an extensive set of tenth grade measures is examined and the relationships of these measures with later educational attainment are analyzed. Chapters 3 and 4 focus on occupational attainments as outcome measures, with chapter 4 covering the job satisfaction aspect. In chapters 5 through 9, the changes that have occurred between 1966 and 1974 in motives, affective states, values, attitudes, aspirations, and behaviors are examined. The findings of the complete study are summarized in chapter 10. The appendixes contain a glossary providing a brief definition of each variable; various information on sampling and statistics; panel biases; population dropout rate; tabular data for figures; stability coefficients; a matrix on intercorrelations among measures; the 1974 questionnaire; and references. (TA)

FINAL REPORT

Grant NE-G-00-3-0198

Project 3-0898

FIVE YEARS BEYOND HIGH SCHOOL:
CAUSES AND CONSEQUENCES OF EDUCATIONAL ATTAINMENT

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Survey Research Center
Institute for Social Research
The University of Michigan
Ann Arbor, Michigan
April, 1977

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM

DATE May 9, 1977

FINAL REPORT--EXECUTIVE SUMMARY

INSTRUCTIONS

In order to provide information in a concise format to constituents, Congress and policy makers, please complete this series of items as an executive summary of your final report. To encourage the widest possible dissemination of your research findings, please use clear, direct language, avoiding technical terms and jargon wherever possible.

This executive summary is not in lieu of your final report, although some of the categories listed herein overlap with items which will be discussed in your final report. In each block, space has been provided for you to reference the pages of your final report which provide additional information on the particular subject area.

Be brief but complete. Additional pages may be submitted as appendices in the format provided in the final page of this summary. Detailed discussions and expanded statements are welcome; however, they should be placed as appendices.

All publications and manuscripts accepted for publication resulting from this grant should be submitted with this report (or as soon as possible): see the section on Dissemination. Five (5) copies of this report and all appendices should be sent to the project officer.

Please type your comments.

ADMINISTRATIVE DATA

1. Grant Number NE-G-00-3-0198

2. Amount of award \$158,667

3. Duration 2 yrs. 8 months
yr/months
(9/1/73-5/31/76)

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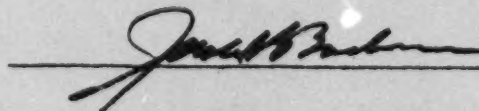
5. Name/Address of Principal Investigator:

Jerald G. Bachman

6. Name/Address of Sponsoring Institution:

Survey Research Center
Institute for Social Research
The University of Michigan
Ann Arbor, Michigan 48106

7. Signature of Principal Investigator:



AIMS OF
THE
PROJECT

8. Briefly describe the specific aims of your project, indicating major changes in direction from the original aims:

The primary objectives were:

(1) To explore the effects of dropping out of high school, particularly by comparing the occupational attainments of dropouts with graduates.

(2) To assess the degree to which educational and occupational attainments are predictable from tenth grade measures.

(3) To determine the role of educational attainment in occupational attainments, particularly as compared with the role of family background and intellectual ability.

(4) To determine the impacts of various post-high school environments and experiences (educational, occupational, military, marital, and parental) on values, attitudes, and behaviors. Included are such outcome dimensions as: self-esteem; occupational attitudes; job satisfaction; views on race relations, government activities, family planning, population issues, use of illegal drugs; self-reported drug use; and delinquent/criminal behavior.

Final Report Page(s)
1-1

9. Were the original aims of the project pursued ☒ Yes ☐ No
If no, please explain:

CONDUCT
OF
RESEARCH

10. Describe the methodology used in your research, including size and characteristics of any sample used, instruments developed or data analysis.

The Youth in Transition project is a longitudinal survey study of a national sample of young men. The study began in 1966, with a sample of 2,277 tenth-graders. The respondents were re-surveyed in 1968, 1969, 1970. The latest re-survey was carried out under this grant in 1974, a point five years after most had graduated from high school.

The initial sample was selected (in 1966) to be representative of boys entering tenth grade in public high schools in the United States. The respondents were located in 87 high schools in communities across the United States. A total of 2,213 (97.2%) of those invited participated in the first data collection. In 1974, 1,628 (73.6%) of the original respondents continued to participate.

The first four data collections involved self-completed questionnaires and personal interviews conducted by the Survey Research Center's staff of trained interviewers. The fifth and final data collection used a self-completed mail-out questionnaire. About 1,300 completed questionnaires were obtained by mail-only contact. The interviewers were employed in a follow-up effort to increase participation, particularly from dropouts. An additional 300 questionnaires were obtained by this effort.

Final Report Page(s)
1-2 to 1-7

11. Did you have any significant methodological difficulties (e.g. sampling, instrumentation, inference)?

Yes ☐ No ☒ If yes, please describe:

CONDUCT
OF
RESEARCH
(Cont'd)

12. Did you have any significant practical operational difficulties (e.g. access, personnel, logistics)? Yes ☐ No ☒
If yes, please describe:

RESULTS

13. Describe your conclusions or results (a) as they relate to your specific aims (include negative results), and (b) their significance in relation to the field.

One objective of the research was to assess the degree to which education attained by age 23 is predictable from measures obtained at age 15. We found we could account for just over 50% of the variance in educational attainment. We also wished to know how well we could account for occupational attainment. Three different indicators of attainment were used: status, wages, and employment (versus unemployment). In general, we found that wages and employment were not very predictable. Job status, however, was more predictable (about 25% of the variance could be accounted for); in particular, it was tied closely to educational attainment, with more education resulting in higher status jobs. The general lack of effect on wages and employment is undoubtedly due to the fact that our sample was in the very early stages of their occupational careers.

We examined variations in occupational outcomes as a function of a number of post-high school environments and experiences, including military service, marital/parental status, urbanicity, region, and county-level labor market conditions. Relationships were generally weak, though we did find more unemployment among veterans, single respondents, in urban areas, and outside the South. Wages and status were highest in urban areas.

RESULTS
(Cont'd)

13. In analyzing the correlates of job satisfaction, we found that intrinsic reward characteristics appeared to be more relevant to an individual's sense of satisfaction with his work than monetary reward or job security.

We examined the links between self-esteem and educational and occupational attainment. We concluded: (1) Self-esteem during high school has little or no direct causal impact on later educational and occupational attainment; they are correlated primarily because of shared prior causes including family background, intellectual ability, and scholastic performance. (2) Occupational status has a modest direct positive impact on self-esteem. (3) Post-high school educational attainment has no direct impact on self-esteem, and only a trivial indirect impact via occupational status. (4) Unemployment seems to have a negative impact on self-esteem.

We also examined the effects of educational attainment on a number of social issues. The results can be summarized briefly by stating that differences in interest and trust in government, views about population concern and birth control and abortion, and views on racial matters did not seem to be affected to any great extent by education. There was some indication that views on Vietnam policy and the role of the military were affected by education.

Another area which showed some definite change associated with educational attainment is occupational attitudes. Differences among the groups with different (Continued on attached)

Final Report Page(s)

14. Describe other findings not directly related to the specific aims (serendipitous findings) and their significance:

The initial project aims were quite broad; therefore, the findings are all related to those aims.

There were, however, some overall shifts in scores which we had not anticipated at the start of the project:

- Self-esteem scores rose, on the average a full standard deviation.
- Trust in government dropped sharply.

Also unexpected was the finding that higher levels of educational attainment were not (as of five years beyond high school) linked to higher levels of job satisfaction. Instead there seem to be two effects of educational attainment that cancel each other--a direct negative effect and an indirect (through job status) positive effect.

RESULTS
(Cont'd)

15. Would you describe the results of your project as;
confirming your hypotheses or expectations ☒
disproving your hypotheses or expectations ☐
inconclusive ☐

16. Did your research result in significant methodological
developments? If yes, describe: ☐ Yes ☒ No

13. Continued

amounts of education which were evident at tenth grade diminished and in some instances reversed eight years later. Those with lower levels of attained education became much more willing to take on responsibility, to learn new things, and to get dirty, if necessary; they also became more concerned about good pay and job security.

We found that variations in the levels of delinquent/criminal behavior were linked to different educational and occupational circumstances. But we concluded that the differences were largely a reflection of long-standing patterns and were not the results of the specific post-high school experiences we examined. With respect to drug use, we found that the largest difference was in the daily use of cigarettes--the higher the level of education, the lower the likelihood of being a smoker. This was not an effect of education, however; the differences were present by the time most respondents were seniors in high school. Unemployment appeared to contribute to increased use of illegal drugs. And marriage appeared to reduce such use.

A major result was our finding that dropping out of high school had no deleterious effects on job status, wages or job satisfaction. With employment controls for family background and ability, dropouts were no worse off than high school graduates with no college experience on these three dimensions. However, we did find that dropouts were almost twice as likely as graduates to be unemployed.

IMPLICATIONS:

17. What further research if any, do you plan in this area?

The present research extended the longitudinal span of the Youth in Transition project. Our earlier findings about dropouts and graduates one year after high school have to a large extent proved applicable to the longer time span. But even five years after high school may be too short a period for learning the effects of dropping out; at least there are those who will argue that in the longer run we should find more differences between dropouts and graduates. Thus it is quite possible that we will propose a further extension--perhaps a data collection in 1979 to look at dropouts and graduates ten years after high school.

Meanwhile, we are heavily involved in a new study which reflects our continuing interests in stability and change in young adults, and the impacts of higher education and other post-high school experiences. This new study, called "Monitoring the Future," is under the direction of Lloyd Johnston and Jerald Bachman, in collaboration with Patrick O'Malley. This study involves a nationwide sampling of high school seniors each year, beginning with the high school class of 1975. A subset of each sample is also followed longitudinally for a period of five years. The study is presently funded by the National Institute on Drug Abuse (NIDA), and thus has a heavy emphasis on drug-related behaviors and attitudes. However, the measures of lifestyles and values cover a broad area, and thus the potential exists for a variety of additional analyses which go beyond the present grant arrangements with NIDA.

18. What are your specific suggestions for additional research by others in this area?

We do not have specific suggestions to offer. However, it seems to us that there are some general directions for research which grow out of our work, but which would take a very different form from our own efforts.

Our findings, like those of others, indicate higher rates of unemployment among dropouts. But our findings also show that the great majority of high school dropouts are just about as well off occupationally as those who graduate from high school (but do not gain further education). This suggests that, for this great majority at least, the educational content of the last year or two of high school can fairly easily be foregone--as far as occupational impact is concerned.

The question remains: why is unemployment higher among dropouts? We have not been very successful in isolating the causal variables. There may be individual differences among dropouts that we have not measured--i.e., some dropouts may really be "misfits" who cannot get or hold a job for some of the same reasons that they could not put up with high school. But the strong suspicion remains that a lot of the unemployment of dropouts reflects an unnecessary discrimination against those without a high school diploma. It seems to us that this notion is open to research but it would most likely involve quite different research approaches than the ones we have used. In particular, it would be useful to study employers and personnel managers, in order to learn more about their use of educational criteria and the rationale for doing so.

IMPLICATIONS:
(Cont'd)

19. What are the policy or program implications of your study?

The major implications have to do with dropping out of high school. One certainly is that exhorting potential dropouts to stay in school in order to get a better job is likely to be misleading. Five years after graduation, those who ended their education with a high school diploma are not getting better jobs--in terms of status, pay, and job satisfaction--but they do have better chances of being employed. Another implication from the data is that the majority of high school dropouts are probably no better or worse as employees than are graduates. If they were, there would presumably be discernible differences in status and wages. But if dropouts are equally good as employees as are graduates, then why are they less often employed?

We believe that dropouts are often victims of discrimination in the job market. Some employers who require a diploma for jobs are discriminating on the basis of a credential which may not be truly indicative of the applicant's potential as an employee. Some proportion of dropouts who are really unsuitable may be screened out effectively by the requirement of a diploma. But this is not a very efficient screening mechanism for the society as a whole. Forcing every young person to stay in school through twelfth grade in order to help in screening for employment hardly seems cost-effective. For one thing, the sheer cost of educating everyone for twelve years, when ten years might suffice very nicely for many, is extravagant. For another, by keeping in school individuals who basically do not fit in well with educational institutions, we make life much more difficult for those who do fit in well; both teachers and serious, willing students suffer from the enforced presence of individual who have little or no positive incentives to be in school. And the experience is considerably unpleasant for the potential dropouts who stay in school in an unhappy environment, doing little but wasting time and causing problems for others.

In a world of rapidly changing technology with its emphasis on continuing education and periodic retraining, there is less and less reason to maintain the traditionally sharp boundary between the role of student and the later role of worker. Shortening the prescribed minimum period for full-time uninterrupted schooling might be a positive step toward new patterns of lifetime education in which individuals can choose for themselves among a wide range of "educational life-styles." If such changes would reduce the credential value attached to high school diplomas, all the better. One of the unfortunate side effects of the anti-dropout campaign has been the tendency to confuse education with credentials; any step in the opposite direction could have a salutary effect on our whole educational establishment. (If new credentials are needed before the old 12-year high school diploma can be de-emphasized, we suggest as one possibility a greater reliance on the competency examinations now being explored in several states.)

DISSEMINATION

20. As an appendix, list publications (and articles accepted for publication) resulting from this project; note those which in your opinion have a minimal relationship to the study. (Please submit future publications based on this project).

21. What are your plans for future publications, papers, and/or application(s) of the results of your study?

The most major additional publication will be an extensive revision of the present final report, which will appear as the sixth volume in the Youth in Transition monograph series:

Bachman, J.G., O'Malley, P.M., and Johnston, J. Youth in Transition, Volume VI: Adolescence to Adulthood--A Longitudinal Analysis of Change and Stability in Young Men (tentative title; expected publication in late 1977).

Several journal articles are in various stages of completion:

Johnston, J. "Overeducation and Job Satisfaction" (submitted to Journal of Applied Psychology in March, 1977).

Bachman, J.G. and O'Malley, P.M. "The Search for School Effects: Some New Findings and Perspectives" (tentative title; manuscript in preparation).

O'Malley, P.M. and others. "An Analysis of the Occupational Attainment Process" (working title; manuscript in preparation).

DISSEMINATION
(Cont'd)

22. What are your suggestions for additional dissemination of the results of your study? Please specify appropriate audience.

No specific suggestions.

APPENDICES: Note - If you are providing additional comments, please number the item to which your comments refer.

#20. There are many publications from the earlier phases of the Youth in Transition project. In addition, the following publications are products of the current grant:

Bachman, J.G., and O'Malley, P.M. Self-esteem in young men: A longitudinal analysis of the impact of educational and occupational attainment. Journal of Personality and Social Psychology, (forthcoming in June, 1977).

O'Malley, P.M., and Bachman, J.G. Longitudinal evidence for the validity of the Quick Test. Psychological Reports, 1976, 38, 1247-1252.

Bachman, J.G., and Jennings, M.K. The impact of Vietnam on trust in government. Journal of Social Issues, 1975, 31, 141-155.

Johnston, L.D., O'Malley, P.M., and Eveland, L.K. Drugs and delinquency: A search for causal connections. In D.G. Kandel (Ed.), Longitudinal research on drug use: Empirical findings and methodological issues. Washington, D.C.: Halstead Press, in press.

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APPENDIX B - SAMPLING AND STATISTICS

APPENDIX C - PANEL BIASES

APPENDIX D - ESTIMATING THE POPULATION DROPOUT RATE

APPENDIX E - TABULAR DATA FOR FIGURES

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CHAPTER 1

INTRODUCTION

This report details the results from the fifth wave of the Youth in Transition project, a longitudinal study of a national sample of young men. The study began in 1966 with a cross-section of tenth-graders, who were then re-surveyed in 1968, 1969, and 1970. The fifth data collection occurred in 1974, a point five years after most had graduated from high school. The primary objectives of this fifth survey were:

- (1) To explore the effects of dropping out of high school, particularly by comparing the occupational attainments of drop-outs with graduates.
- (2) To assess the degree to which educational and occupational attainments are predictable from tenth grade measures.
- (3) To determine the role of educational attainment in occupational attainments, particularly as compared with the role of family background and intellectual ability.
- (4) To determine the impacts of various post-high school environments and experiences (educational, occupational, military, marital, and parental) on values, attitudes, and behaviors. Included are such dimensions as: self-esteem; occupational attitudes; job satisfaction; views on race relations, government activities, family planning, population issues, use of illegal drugs; self-reported drug use; and delinquent/criminal behavior.

Research Design and Methods

The research design centers around a panel of 2213 adolescent boys chosen in 1966 to be representative of boys entering tenth grade in public high schools in the United States. The panel agreed to be surveyed at intervals of one year or more for an indefinite period. For those who did not drop out of high school, the first three data collections occurred while panel members were still in school. The first took place in the fall of 1966 when the subjects had just entered tenth grade. Additional data collections occurred in the spring of 1968 (the end of eleventh grade for most boys) and the spring of 1969 (just before most were graduated). The last two data collections corresponded to one year and five years beyond high school: the spring of 1970 and the spring of 1974. Additional data concerning school environments were obtained from principals, counselors, and samples of teachers in each of the schools which participated in the study.

This sequence of five data collections from the panel represents an improvement over the three data collections projected at the beginning of the study in 1965. Details on the original study design can be found in Volume I of the Youth in Transition Series by Bachman et al. (1967).

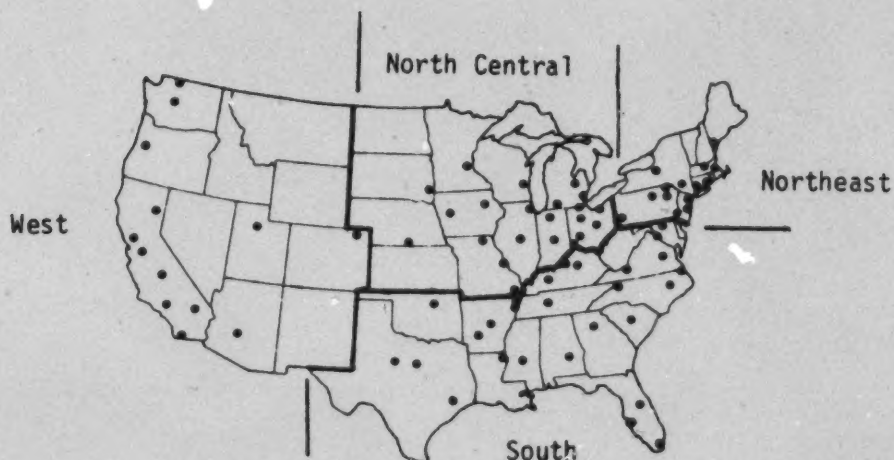
Sample Design and Response Rates

The study began with 2213 tenth-grade boys located in 87 public high schools. The schools were located in communities across the United States, corresponding to the Survey Research Center's primary sampling units (see Figure 1-1). Schools and boys were selected through a multi-stage sampling design in such a way that the probability of a school's selection was proportionate to its size (i.e., the estimated number of tenth-grade boys), and roughly equal numbers of boys (about 25) were selected

from each school. The net effect of this design is to provide an essentially bias-free representation of tenth-grade boys in public high schools throughout the contiguous United States. Technically, to provide bias-free representation, weights must be applied to the data, because some schools were too small to provide the requisite number of cases. In fact, the weights are small -- they average 1.14 across the sample -- and make very little difference in the calculated point estimates associated with univariate and bivariate analyses. Furthermore, the rationale for using weights in complex multivariate analyses or on samples which have suffered attrition is not very firm. For these reasons, in this report we have chosen to present analyses based on unweighted data.

Figure 1-1

Distribution of
Primary Sampling Units in the
Survey Research Center's Sampling Frame of
the United States



Response rates for the initial data collection must be considered at two levels. A total of 88 schools were originally sampled and invited to participate; an affirmative response was obtained from 71, and replacement schools in the same geographic areas were secured for all but one of the remaining schools. In the resulting 87 participating schools, 2277 boys were invited to participate in the study. A total of 2213 (over 97 percent) of the young men participated in the first data collection.

Table 1-1 presents a summary of data collections and the response rates throughout the study. As the table indicates, more than 73 percent of the young men who began the study in 1966 were still participating in 1974. Additional details on the sample and response rates are contained in several appendixes.

Field Procedures

There were five data collections from this panel of young men. The initial data collection took place in schools and during school hours. Individual interviews were conducted with all respondents by the Survey Research Center's staff of trained interviewers. After all interviewing had been completed in a school, the participants as a group spent a morning or afternoon completing a battery of tests and questionnaires. The group sessions were conducted by the interviewers, following standardized instructions.

The second, third, and fourth data collections were limited to interviews and questionnaires and were conducted at "neutral sites"--locations such as library conference rooms, community centers, church basements, and the like. Since it was important to have the interviewing conditions as similar as possible for dropouts and stayins, it was considered undesirable to conduct these interviews in school buildings. It was also undesirable to collect the data in respondents' homes, since the potential

Table 1 - 1

Data Collections from Young Men

	TIME 1	TIME 2	TIME 3	TIME 4	TIME 5
Date	Fall, 1966 (tenth grade)	Spring, 1968 (eleventh grade)	Spring, 1969 (twelfth grade)	Spring, 1970 (grade 12 + 1 yr)	Spring, 1974 (grade 12 + 5 yrs)
Procedure	Individual inter- views; group-ad- ministered tests and question- naires	Individual in- terviews and questionnaires; \$2 payment	Group adminis- tered question- naires; \$5 pay- ment	Individual inter- views and ques- tionnaires; \$10 payment	Mail question- naires; \$10 pay- ment
Location	Schools	"Neutral Site"	"Neutral Site"	"Neutral Site"	Respondent's home
Number of Respondents ^a	2213	1886	1799	1620	1628
% of Original Sample (<u>N</u> = 2277)	97.2%	82.8%	79.0%	71.1%	71.5%
% of Time 1 Panel (<u>N</u> = 2213)	100%	85.2%	81.3%	73.2%	73.5%

^aProbability sample located in 87 schools.

1-5

lack of privacy might have interfered with frank and open answers to some rather personal questions. Interviewers arranged "neutral sites" in the same general neighborhood as the schools used in the initial data collection, then contacted respondents (usually by phone) to arrange individual appointments. At Time 4 special efforts were made to locate young men who had entered military service. Interviewers were sent to military bases in the case of domestic assignments, and a special self-completed questionnaire version of the interview was sent to panel members serving in Vietnam.

The fifth and final data collection used a self-completed mail-out questionnaire. About 1,300 completed questionnaires were obtained via mail-only contact. Survey Research Center interviewers were employed in a special follow-up effort to insure maximum participation. Working within a limited budget, the interviewers tried to contact all nonrespondents in their immediate geographical areas. Particular emphasis was placed on contacting those panel members who had been identified as high school dropouts. An additional 300 questionnaires were obtained by this follow-up effort.

A large number of dimensions were measured in the five data collections from young men. The initial data collection included tests of ability and academic skills, measures of family background characteristics, and a large number of "criterion" dimensions: affective states, self-concepts, values and attitudes, plans, and behaviors. These measures need not be reviewed here; they are described in Bachman (1970), and a number of them are briefly described in the glossary of this report (Appendix A). But it is worth noting that some of the criterion dimensions were repeated in all five data collections, thus permitting a fairly detailed assessment of change during the eight-year span of the

longitudinal design.

Sources of Bias in a Longitudinal Study

Two special types of bias are a possibility in longitudinal studies. First, it may be that repeated data collections will lead to changed answers; individuals who answer some of the same questions two or three years in a row may show systematic changes in responses simply because of the repetition. Second, it may be that certain types of individuals are especially likely to leave the panel of subjects, thereby biasing the sample that remains in later data collections.

Repeated measurement. The first problem, repeated measurement effects, was explored by using a small "control group" sample of individuals who were selected at the time of the initial data collection (1966) but not contacted until the fourth data collection (1970). One hundred fifteen such "control" subjects completed the fourth data collection, and their responses were compared with matched subjects from the regular sample. The results clearly indicated the absence of repeated survey effects; those who had been participating in the study for nearly four years gave the same sorts of answers as did their matched classmates from the "control group" who were answering for the first time. (See Appendix C for more details.)

Panel losses. As noted earlier, 74 percent of the original panel were still participating in the study some eight years after the initial data collection. This represents a very acceptable retention rate for a panel study and compared favorably with the response rate for many one-time cross-sectional surveys. But what can be said of those who left the study — do they come disproportionately from particular subgroups, thus biasing the particular sample that remains? Because there are initial (Time 1) data from nearly all subjects in the sample, it has been possi-

ble to see how those who left the study were different (in initial characteristics) from those who continued their participation throughout the study. (These differences and their implications are discussed in more detail in Appendix C; only the conclusions are reported here.) On the whole, the composition of the sample at Time 5 looks remarkably similar to the original sample from Time 1, as shown in Table 1-2. The distributions for region and community size are almost identical, i.e., the percentages of respondents in the four geographical regions of the United States and in the six community size categories are nearly the same at Time 1 and Time 5. Data on the socio-economic level of the boy's family show a small loss from the lowest level; the original sample had 22 percent in the bottom category while the Time 5 sample had 19 percent. Similarly with general intelligence; there was a three percent decrease in the two lowest categories of intelligence. The most severe losses occurred among blacks and among high school dropouts. The original sample had approximately 12 percent blacks -- the national average at that time; the retained sample has only eight percent. An estimated 18 percent of the original sample became dropouts, but the retained sample has only 13 percent.¹

What are the implications of these panel losses on population estimates and on relationships between variables? In general, this study has not been concerned with making population estimates of the distribution of various characteristics; instead, it has focused on relational analyses dealing with the ways in which person or environment characteristics relate to selected outcomes such as educational or occupational attainment. However, several years ago the study scope was expanded to include the measurement of drug use behaviors. This expansion led to several intensive efforts to re-weight the retained sample so as to reconstitute the original sample. In doing so it was discovered that the new

TABLE 1-2

Comparison of the Time 5 Retained Sample with the Original Sample

Time 1 Variable	Percentage Composition	
	<u>Original Sample*</u>	<u>Retained Sample*</u>
<u>Region of the Country (1966)</u>		
West	15%	16%
North Central	31	31
Northeast	23	23
South	31	30
<u>Community Size</u>		
Rural	24	23
Small Town	19	20
Small City	15	15
Medium City	11	11
Suburb	20	20
Large City	11	11
<u>Socioeconomic Level of Family</u>		
a. Low	22	19
b.	27	27
c.	26	27
d.	15	16
e. High	7	8
Missing Data	3	2
<u>Intactness of Family</u>		
Intact	80	83
Broken by Death	8	7
Broken by Divorce	13	10
<u>Race</u>		
Whites	87	91
Blacks	12	8
Others	2	2
<u>Delinquency</u>		
a. Low	22	20
b. Medium	56	57
c. High	22	23
<u>Intelligence (Quick Test)</u>		
a. Low	9	7
b.	19	18
c.	37	38
d.	27	28
e. High	8	9
<u>High School Completion</u>		
Stay-ins	82	87
Dropouts	18	13

*Original Sample weighted N = 2519; Time 5 sample weighted N = 1869

weights resulted in revised estimates of various types of drug use that differed by a range of one-tenth of a percentage point to less than two percentage points (0.1% - 1.8%). (For further detail see L. Johnston, 1973, 1975.) These analyses and others have led the authors to conclude that the retained sample is quite adequate, and that the introduction of sample weights into the analyses is unnecessary given their marginal contribution to accuracy.

The second potential problem with panel attrition concerns the impact on relational analyses. However, the analyses presented in Appendix C indicate that this is probably not a serious problem in general. In that appendix, correlations among major variables measured in 1966 are computed based on two different groups--the entire 2,213 respondents in the 1966 sample versus the 1,628 respondents retained in the 1974 sample. Comparisons of corresponding correlation coefficients show very little differences. One specific relationship that is of interest is that between educational attainment and occupational outcomes. For example, will our under-representation of high school dropouts affect the shape of the relationship which is observed between educational attainment and an outcome such as rates of unemployment or status of attained job? It will if the school dropouts who left the study are different in characteristics from those school dropouts who stayed in the study. Our examination of the issue indicates that this is not the case, as was demonstrated in the monograph on dropouts (Bachman et al., 1971). In that monograph three major analysis groups were distinguished: high school dropouts, high school graduates with no further education, and graduates who continued their education after high school. It was possible to classify most non-respondents into the appropriate analysis group on the basis of earlier data or reports obtained from interviewers during follow-up attempts. Time 4 participants

were compared with non-participants on a number of measures from the initial interview. The authors concluded that:

In general, the initial scores for intelligence, socio-economic level, etc., obtained at the start of tenth grade are about the same for those dropouts who participated at Time 4 as for those non-participants who were identified as having dropped out. This conclusion for [dropouts] also applies to [high school graduates with no further education and graduates who continued their education after high school]. In other words...within each analysis category there is little difference in background and ability between those who continued their participation through Time 4 and those who did not. (Bachman et al., 1971, p. 19)

While the shape of the relationship should not be affected by the under-representation of dropouts, estimates of the explanatory power of this variable in the population (e.g., percent of variance explained) could be affected. However, not a great deal of emphasis is given to such statistics in this report. The concern is more with the relative amounts of variance explained by different person and environment characteristics.

Similar investigations of the impact of panel attrition have not been done for blacks, primarily because the study was not designed to address the issue of racial differences, and thus the sample is inadequate to this task in most cases. In this report differences between whites and other racial/ethnic groups are not reported. (See Bachman, 1970, for a discussion of racial groupings in this study.)

Conclusion. The panel originally constituted in 1966 was a representative national sample of the male members of the public high school class of 1969. Eight years later the respondents who remained in the panel continue to be representative on most dimensions. An exception occurs for high school dropouts who were lost disproportionately from the sample. This bias should not affect

the shape of any of the relationships noted, and should affect the population estimates of the strength of relationships only in the case of a variable such as dropping out.

The Class of 1969: A Profile Five Years Later

What are the young men in the Youth in Transition (YIT) panel like? Where did they come from and what were they doing in spring of 1974? The answers to these and similar questions provide a necessary backdrop for interpreting the findings of this study. On the one hand, they demonstrate the representativeness of the YIT sample; on the other, they provide a context in which to interpret our respondents' achievements.

Demographic Characteristics

The sample was originally selected from the 74 primary sampling units which comprise the sampling frame for national studies of the Survey Research Center. The location of these units is shown in Figure 1-1. The result of using this procedure is the selection of respondents from all regions of the country (Table 1-3A) and from locations which vary in population density from sparsely populated rural farm areas to large metropolitan centers such as New York and Los Angeles (Table 1-3B). In 1974 some 45 percent of the retained sample were living in relatively small communities of less than 50,000 people; indeed, 19 percent were in rural or farming communities. By comparison, census data show that 60 percent of the entire population live in rural/small-town areas of this size. The figure of 45 percent for the YIT sample shows that while there might have been some movement to the cities--a continuing trend in the United States over the last century--an impressively large percentage did not make such a move. Although young adults are considered to be highly mobile, fully 70 percent indicated that they were living within 50 miles of the place where they lived when last in high school. (But it should be noted that

Table 1-3

Selected Characteristics of the Youth in Transition Panel
Spring, 1974

A. <u>Region of Residence</u>		B. <u>Urbanicity</u>	
Northeast	21.8%	Rural or farming community	18.9%
North Central	29.5	Small tw. or city (<50,000)	25.6
South	30.3	Medium city/suburb (50K-100K)	17.4
West	18.4	Fairly large city/suburb (100K-500K)	19.2
	<u>100.0%</u>	Very large city/suburb (>500K)	18.9
			<u>100.0%</u>
C. <u>Age</u>		D. <u>Race</u>	
< 22.5	8.4%	Black	8.5%
22.5-23	36.4	White	89.7
23-23.5	32.8	Other	1.7
23.5-24	11.8		<u>100.0%</u>
> 24	10.6		
	<u>100.0%</u>		
Median age = 23.4			
E. <u>Marital Status</u>		F. <u>With whom do you live?</u>	
Single	49.1%	a. By myself	13.8%
Married ^a /no children	27.2	b. With parents	23.9
Married ^a /some children	23.7	c. With wife	45.5
a. one child	16.9	d. With other relatives	3.8
b. two children	5.7	e. With persons not related to me	17.0
c. three or more children	.9	f. Other	1.1
	<u>100.0%</u>		<u>105.1^b%</u>

^aIncludes a total of 3.7 percent of the panel who were divorced or separated

^bMultiple responses possible. Most frequent was a combination of "c" and "d."

those who did move more than 50 miles away are less likely to be participants in 1974.)

Since the panel was selected as a grade cohort, there is a range of ages -- from 21 to 25 with a median age of 23.4 years (Table 1-3C). Originally, the racial composition of the panel matched national distributions; 12 percent of the youth were black. Over the eight years of the study panel attrition was slightly heavier among blacks, leaving the present panel with 8.5 percent blacks. Other minorities make up 1.7 percent of the panel (Table 1-3D).

The late teens and early twenties is associated with severing ties with parents and the parental home and establishing one's own household. The panel was well into this transition by age 23; about one-half (51.6 percent) had married and one-quarter had children. Census (1974a) data indicate that in March of 1974, 53.6 percent of the 23 year-old males had been married at least once. Most of the panel were in different housing arrangements than during high school; less than one-quarter were still living with their parents (Table 1-3E,F).

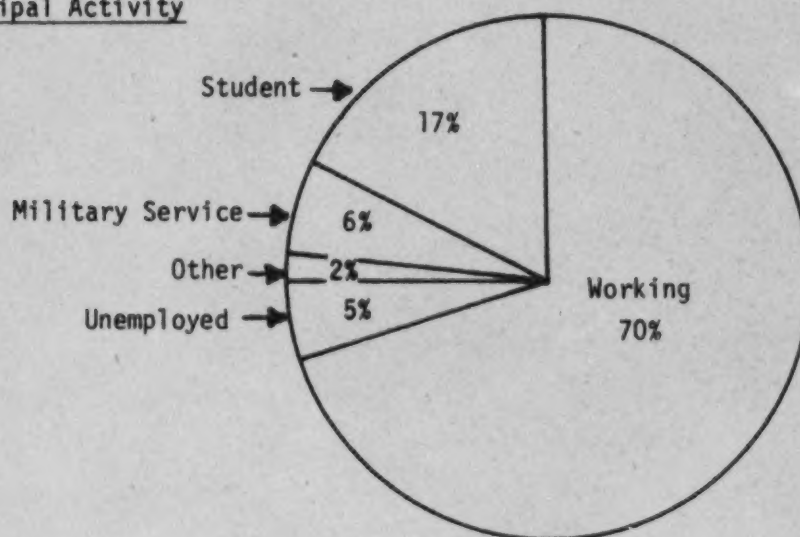
Figure 1-2A shows the principal activities in which the panel were engaged at Time 5. Three-quarters were in the labor force and seventeen percent were still students, although many of the latter would soon be completing their education and entering the labor force. Six percent were in military service, and another 20 percent of the panel had some form of military experience behind them. This total of 26 percent having some form of military experience is quite reasonable for this age group, since they reached draft age in 1969 at the height of the Vietnam conflict. Undoubtedly, subsequent high school classes graduating during the 1970s will have a lower rate of military service.

(In Appendix C there are several tables which show selected

Figure 1-2

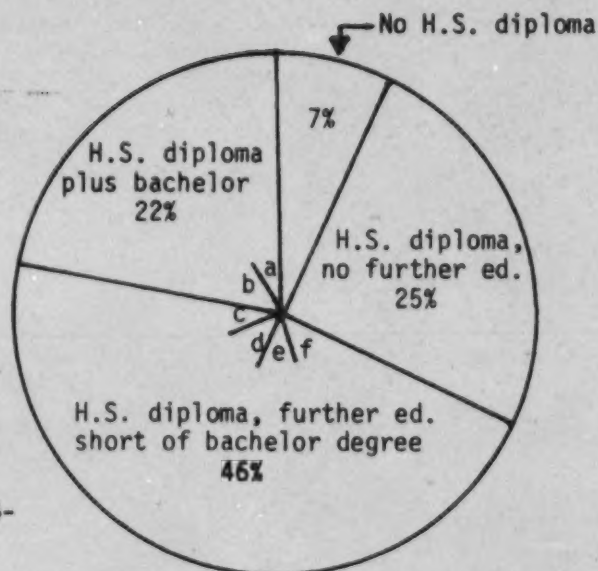
Principal Activity and Educational Attainment
of the Youth in Transition Panel
Spring, 1974^a

A. Principal Activity



B. Educational Attainment

- a. Bachelor + some graduate work (7%)
- b. Bachelor degree (15%)
- c. Associate degree (9%)
- d. Some 4-yr. college (14%)
- e. Some 2-yr. college (10%)
- f. Some training, not 2 or 4-yr. college (13%)



comparisons of the YIT panel with Census data. See Tables C-2 and C-3).

Educational Attainment and Aspiration

Figure 1-2B shows the educational attainment of the YIT panel. Ninety-three percent had secured a high school diploma or its equivalent at this point. This percentage is slightly higher than the figure reported in earlier years (Bachman et al., 1971) since a number of dropouts found a way to complete their high school work after leaving school (night school, General Education Degree, etc.).

As indicated earlier, "high school dropout" is one of two groups from which the YIT panel has had disproportionate losses over the eight years of the study. We estimate that 10 percent ($\pm 1\%$) is the true percentage of dropouts who had not earned a high school diploma or its equivalent by age 23 (the calculations for this estimate are contained in Appendix D). Using this figure, we conclude that the YIT panel at Time 5 -- five years beyond normal graduation for the Class of 1969 -- under-represents dropouts by a factor of 1.4.

Again it should be noted that analyses were performed comparing the characteristics (using Time 1 data) of those dropouts who stayed with the panel and those who did not. The results indicate that those who stayed with this study are representative of the larger group -- at least on those characteristics -- and therefore adequate for relational analyses.

Looking again at Figure 1-2B, we note that fully two-thirds of the panel continued their education beyond high school. They pursued a large variety of options ranging from on-the-job training and vocational schooling to the more academic approaches represented by four-year colleges. Twenty-two percent completed a bachelor's degree. When compared with attainments of most western

societies this is indeed a high level of educational attainment.

To these data on attainment can be added the aspirations these men held for additional education. The panel was asked early in the questionnaire:

Now we'd like to know about some things you already are doing or have done or plan to do in the next few years. Please look at each of the ten activities below and check...how likely you are to do each.

There were six response alternatives:

- (1) I am now doing this
- (2) I have already done this
- (3) I definitely will do this
- (4) I probably will do this
- (5) I probably will not do this
- (6) I definitely will not do this

The data from these questions are displayed in Table 1-4. The data suggest that at a point in time five years beyond high school, many young men have high attainments in the area of education and training, and many continue to aspire to additional educational training. While 94 percent of the panel members had earned (or were just short of earning) their high school diploma, fully half of the remaining six percent were still looking forward to receiving high school certification at some time in the next few years. To the graduates of two-year and four-year colleges must be added another 14 percent and 24 percent respectively who anticipated graduation in the near future. And fully one quarter of all panel members thought it likely that they would pursue some form of graduate or professional training beyond the bachelor's degree. While census data on attainment of older age groups raise questions about whether these aspirations will be fulfilled in the next few years, their very expression is a sign of the extent to which education and training have become deeply ingrained in the plans of

Table 1-4

Educational Attainment/Aspiration at Age 23

<u>Education/Training Activity</u>	<u>Attained or Almost^a</u>	<u>Expect to Attain^b</u>	<u>Total</u>
Complete high school or earn high school equivalency	94.0%	3.3%	97.3%
Attend a technical or voca- tional school since high school	19.8	12.3	32.1
Two-year college: attend	24.2	8.9	33.1
Two-year college: graduate	11.6	14.2	25.8
Four-year college: attend	44.0	11.4	55.4
Four-year college: graduate	24.8	23.6	48.4
Attend graduate or profession- al school after college	7.6	25.4	33.0

^aIncludes those who marked "now doing" or "already done." Some-
times higher than percentages in Figure 1-2 because of the "now
doing" group who are not included in Figure 1-2.

^bIncludes those who marked "definitely will" or "probably will"
do this.

American youth in 1974.

Occupational Attainment and Aspirations

As Figure 1-2A shows, the principal activity as of spring, 1974, for most of the sample was working on a job. Table 1-5 shows what kinds of jobs the respondents held. The largest single category, with about 30% of the workers, is operatives and service workers. Included in this category are such jobs as bus driver and factory worker. Another 21% are craftsmen (carpenters, electricians, etc.). Clerical and sales workers are about 12% of the group. Nearly 26% are already in relatively high status jobs--professional and technical workers, or managers and proprietors. The remaining workers are laborers (9%) and farmers (2%).

At each of the five data collections, the panel was asked what job they expected to have twenty years later. These job aspirations were converted to scores on the Duncan scale of socioeconomic status of jobs (Duncan, 1961). Scores on this scale range from 1 to 96, with the lowest scores being assigned to jobs such as laborer in a sawmill or railroad yard and the highest scores to professions such as physician or judge. As shown in Figure 1-3, in tenth grade (1966) the average Duncan score for aspired occupations was 62. Over the following eight years, this average declined in small amounts down to 55--a drop of nearly one-third of a standard deviation. (The average Duncan score for the occupation attained as of 1974 is only 36. But the data in Figure 1-3 are based on the total sample, many of whom were still students and therefore have no attained occupation. The occupations which the students will enter after college will generally be quite high in status.)

Some of the decline evidenced in Figure 1-3 is undoubtedly due to changes in educational aspirations. For others, the decline is probably attributable to the fact that they are learning

Table 1-5

Types of Jobs Held in 1974

<u>Category</u>	<u>N</u>	<u>%</u>
Professional & Technical	155	15.8
Manager & Proprietor	100	10.2
Clerical & Sales	115	11.7
Craftsmen	207	21.0
Operatives & Service Workers	298	30.3
Non-Farm Laborers	86	8.7
Farmers	23	2.3
	<u>984</u>	<u>100.0%</u>

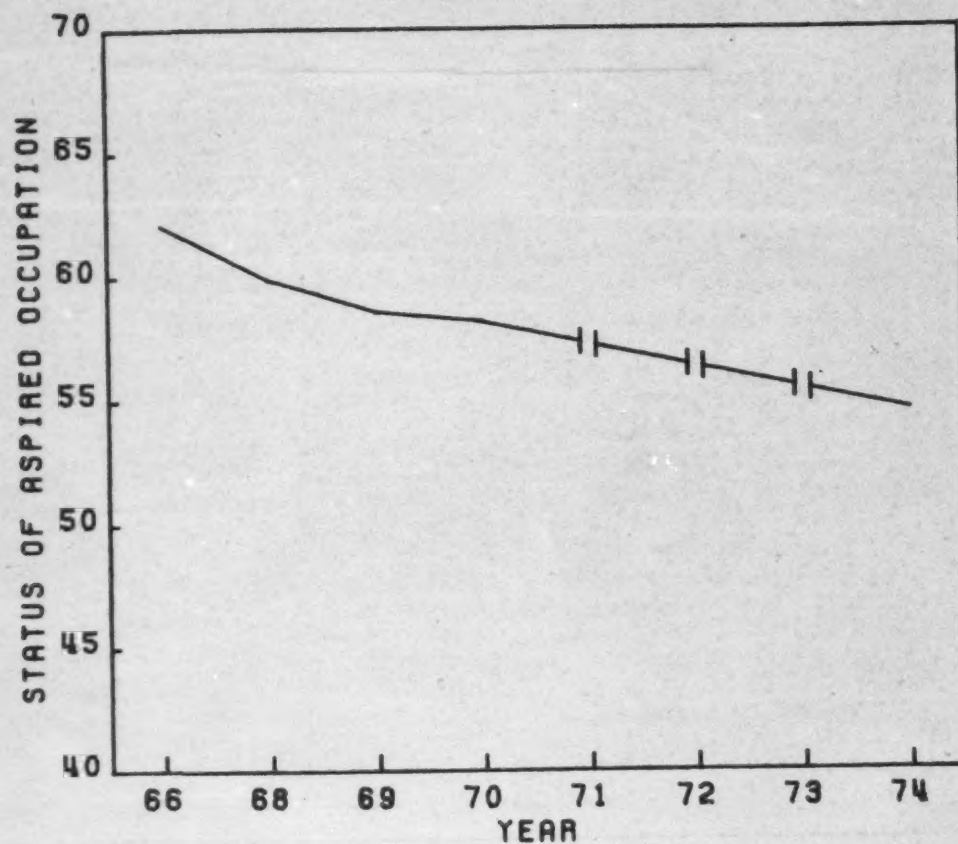


Figure 1-3 Status of Aspired Occupation, 1969 to 1974

more about the realities of the labor market.

Summary

The YIT panel at age 23 is representative of young men from the high school Class of 1969. The characteristics of those who remained with the panel through 1974 match quite closely with Census characteristics, with the exception that the panel is slightly more educated and has more whites than it would if the entire sample had remained with the study throughout its eight years. At age 23 these young men had largely completed the transition from school to work and had begun establishing homes and families of their own and settling into jobs that would support a life apart from their parents.

Overview of Report

The following is a brief overview of the rest of this report. In chapter 2, educational attainment is treated as an outcome variable; we examine an extensive set of tenth-grade measures and analyze their relationships with later educational attainment. In chapter 3, the focus is on occupational attainments (status, employment, and wages) as the outcome measures. The role of education as a determinant of occupational attainment is emphasized. Chapter 4 focuses on a more subjective aspect of occupational attainment, job satisfaction. Education and job characteristics are examined to assess their effects on job satisfaction.

In chapters 5 through 9 we study the changes that have occurred between 1966 and 1974 in motives, affective states, values, attitudes, aspirations, and behaviors. We report on whether different environments and experiences during the late teens and early twenties are linked to different patterns of change. Chapter 5 highlights change on one very important dimension, self-esteem. Particular attention is paid to the effects of educational

and occupational attainments. This chapter also introduces, in a specific context, some of the complexities of analysis and interpretation. In chapter 6 we spell out the rationale and procedures for analyzing changes as a function of various social environments and experiences. Chapter 7 includes motives, affective states, values, and views on social issues. Chapter 8 is concerned with changes in job attitudes and aspirations. Delinquent behavior and drug use are the subject of chapter 9. Finally, chapter 10 summarizes the findings.

In Appendix A is a glossary which provides a brief definition of each variable. Further information can be found in earlier publications of Youth in Transition, especially Volumes I and II. The broad scope of measurement, and the fact that many dimensions were measured at multiple time points, result in an abundance of variables. To provide some aid to the reader, we list in Table 1-6 all the variables, grouped into conceptual categories, to which we refer in the report.

Appendixes B through F contain various material of potential interest to some readers. Appendix G contains a large correlation matrix, giving the product-moment correlation among most of the variables of interest in this report. Appendix H contains a copy of the questionnaire used in the 1974 data collection. And finally, Appendix I contains a list of references.

Table 1-6

List of Variables by Conceptual Category

	1966 1	1968 2	1969 3	1970 4	1974 5
<u>Educational Attainment</u>					
Number Years Schooling ^a					X
Education Attained ^a					X
<u>Occupational Attainment</u>					
Job Status - Duncan ^a					X
Employment Status ^a					X
Hourly Pay Rate ^a					X
Job Satisfaction ^a					X
Job Characteristics (Actual) ^a					X
<u>College</u>					
College Status Ranking					X
College Mean ACT Score					X
<u>Environments/Experiences</u>					
Military Service				X	X
Marital/Parental Status				X	X
Urbanicity	X	X	X	X	X
<u>Family Background</u>					
Socioeconomic Level	X				
Father's Occupation	X				
Father's Education	X				
Mother's Education	X				
Number of Possessions in Home	X				
Number of Books in Home	X				
Number of Rooms/Person	X				
Number of Siblings	X				
Intactness of Home	X				
Parental Punitiveness	X				
Race	X				
Region	X				
Urbanicity (Origin)	X				
<u>Ability</u>					
Composite Ability	X				
Quick Test	X				
GATB-J	X				
Gates Reading Test	X				
<u>Educational Behaviors</u>					
Repeated Grade	X				
Average Grades (High School)	X	X	X		
Number of Hours Homework	X	X	X		
Rebellious Behavior in School	X	X			
Curriculum	X	X	X		

	1966 1	1968 2	1969 3	1970 4	1974 5
<u>Educational Plans</u>					
College Plans	X	X	X		
<u>Educational Attitudes</u>					
Interest in Courses	X	X	X		
Positive School Attitudes	X	X	X		
Negative School Attitudes	X	X	X		
Academic Achievement Value	X	X	X	X	
<u>Self-Concepts</u>					
School Ability	X	X			
Does Best Work in School	X	X			
Works Harder than Average	X	X			
Satisfaction with School Work	X	X			
Self-Esteem	X	X	X	X	X
<u>Motives</u>					
Need-Social Approval	X				
Test Anxiety	X	X			
Need-Self-Development	X	X	X	X	
Need-Self-Utilization	X	X	X	X	
<u>Affective States</u>					
Happiness	X	X	X	X	
Negative Affective	X	X	X	X	
Somatic Symptoms	X	X	X	X	
Impulse to Aggression	X	X	X	X	
<u>Social Values & Attitudes</u>					
Social Values Cluster	X	X	X	X	
Internal Control	X	X	X	X	
Trust in People	X	X	X	X	
Trust in Government	X	X	X	X	X
Interest in Government	X	X	X	X	X
Racial: Strong Government			X	X	X
Racial: Social Distance			X	X	X
Racial: Perceived Discrimination			X	X	X
Vietnam Dissent			X	X	X
Military Influence			X		X
Abortion				X	X
Population Concern				X	X
Desired Family Size				X	X
<u>Occupational Attitudes & Aspirations</u>					
Job that Pays Off	X	X	X	X	X
Job that Doesn't Bug	X	X	X	X	X
Ambitious Job Attitudes	X	X	X	X	X
Status of Aspired Occupation	X	X	X	X	X
Job Characteristics (Ideal)	X	X	X	X	X

	<u>1966</u> <u>1</u>	<u>1968</u> <u>2</u>	<u>1969</u> <u>3</u>	<u>1970</u> <u>4</u>	<u>1974</u> <u>5</u>
<u>Delinquent Behaviors</u>					
Delinquent Behavior in School	X	X	X		
Seriousness of Delinquency	X	X	X	X	X
Interpersonal Aggression	X	X	X	X	X
Theft and Vandalism	X	X	X	X	X
<u>Drug Use</u>					
Cigarettes ^b			X	X	X
Alcohol ^b			X	X	X
Marijuana ^b			X	X	X
Amphetamines ^b			X	X	X
Barbiturates ^b			X	X	X
LSD ^b			X	X	X
<u>High School-Aggregate</u>					
Mean Socioeconomic Level	X				
Mean Quick Test	X				
Mean GATB-J	X				
Mean Gates Reading Test	X				

^aThis dimension was also measured at earlier time points, but only the 1974 measure is analyzed in this report.

^bUse prior to 1969 was measured retrospectively in 1970.

Note. An "X" indicates the particular dimension was measured at the indicated time point.

FOOTNOTES

¹Table 1-2 indicates that 13% of the sample are dropouts, while Figure 1-2B shows only 7% as dropouts. The discrepancy is due to two different definitions of dropout. In Table 1-2, a dropout is defined as in Volume III (Bachman et al., 1971), any one who interrupts full-time attendance in high school for more than a few weeks. This definition is used to make the figures in the two columns comparable. But in Figure 1-2B, and in the rest of this report, a dropout is defined as anyone who does not have a high school diploma or equivalent.

CHAPTER 2

PREDICTORS OF EDUCATIONAL ATTAINMENT

In this chapter we will examine the predictors of educational attainment. We will determine how tenth-grade measures relate to the educational outcomes of twenty-three year old men. There is considerable similarity to what was done in Chapters 3, 4, and 5 of Volume III in the Youth in Transition series (Bachman et al., 1971). There, the authors related tenth-grade measures to the educational attainments of nineteen year old men. The measure of attainment at that early time was a trichotomy: dropouts, high school graduates, and college attenders. The current measure of attainment, obtained four years later is much more complete and detailed; nevertheless, many of those earlier relationships will not have changed very much. Since this chapter builds so heavily on the previous work in Volume III, we will deal with the prediction in a much abbreviated fashion. The interested reader is referred to Volume III for more discussion of the predictor variables, and also to Volume II for an extensive examination of "The Impact of Family Background and Intelligence on Tenth-Grade Boys" (Bachman, 1970).

We have organized the presentation of results somewhat differently than in Volume III. We will use the order in Table 1-6, beginning with family background and continuing through ability; educational behaviors; educational plans, values, and attitudes; self-concepts; motives and affective states; social values and attitudes; occupational attitudes and aspirations; and finally, delinquent behaviors.

For display purposes, we will use a four-category version of educational attainment: (1) dropouts, those without a high school diploma; (2) high school graduates with no post-high school education; (3) high school graduates with some post-high school education, but

no bachelor degree; (4) those with a bachelor degree. These will be somewhat imprecisely referred to as: (1) dropouts; (2) high school graduates; (3) some college; and (4) college graduates.

The data underlying each of the Figures to be presented can be found in Appendix E. The tables in the appendix show percentages and frequencies for six levels of educational attainment. For better graphic display, only four are actually shown in the figures. The product-moment correlation, based on the eight-category version and included in Appendix G, is also shown.

Family Background

Socioeconomic Level. In many ways, the most basic predictor variable in the Youth in Transition study is family socioeconomic level (SEL). The summary or index measure of socioeconomic level is a mean of six equally-weighted ingredients: the Duncan status of father's occupation; father's educational level; mother's educational level; number of rooms per person in the home; number of books in the home; and a checklist of other possessions in the home.¹ These ingredients are all "determinants of whether a home is a rich environment for learning, an environment in which education and achievement are likely to be encouraged" (Bachman, 1970, p. 10). They may all be thought of as indicators of the quality of the home environment. The summary measure is designed to capture much of this quality in a single variable. For any given dependent variable, use of all six ingredients taken separately would provide some additional variance explained, and perhaps some additional empirical or theoretical insight as well; however, in virtually every instance we have looked at, the single measure explains very nearly as much variance as the ingredients (see Appendix G, which includes both the index and the six ingredients). Given the simplicity and parsimony of the single measure, we will use it to characterize the quality of family background.

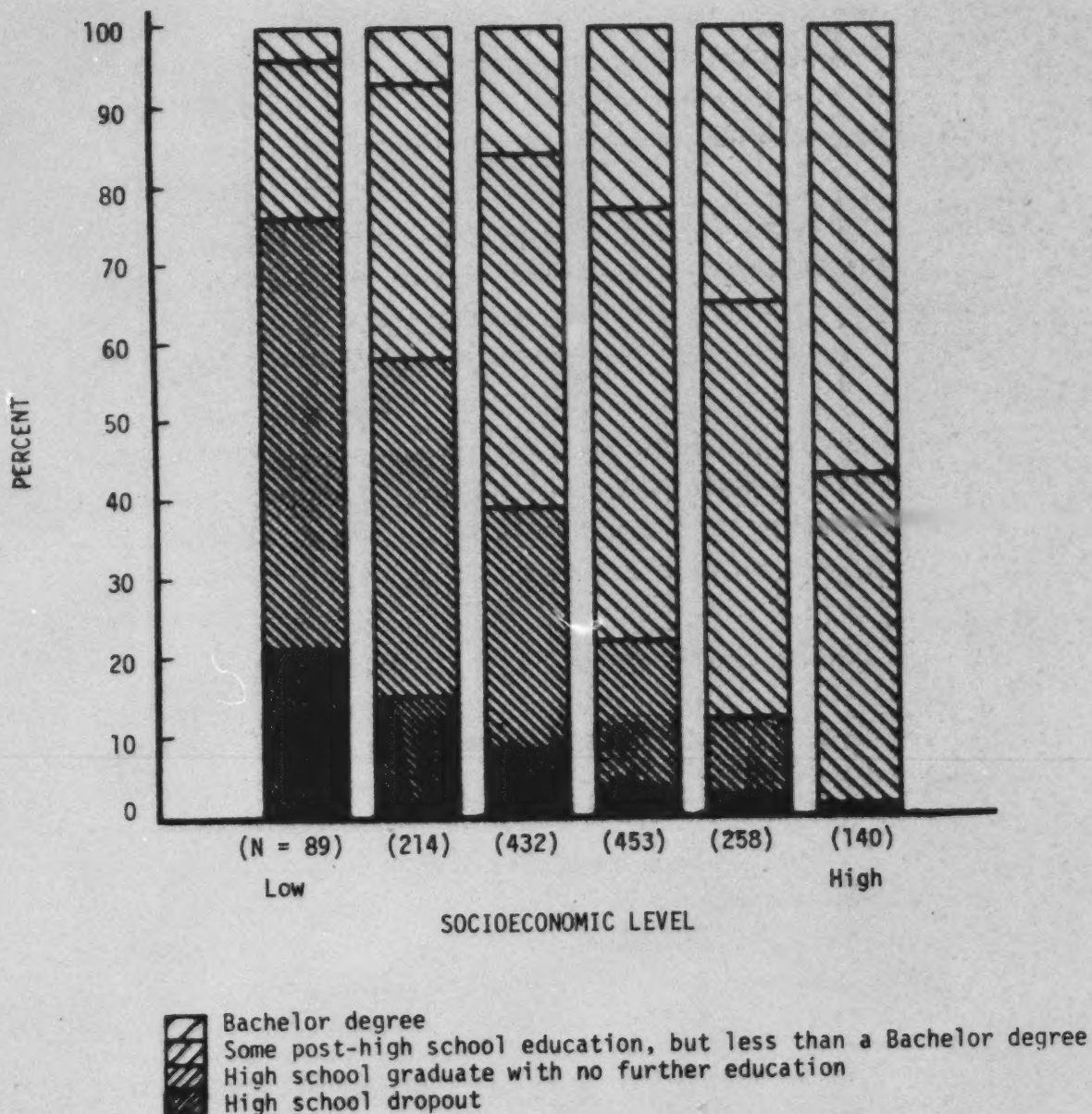
Figure 2-1 shows the relationship between socioeconomic level and the four-category measure of educational attainment. Not surprisingly, the relationship is quite strong ($r = .47$). None of the 140 respondents in the top category failed to get a high school diploma, and over 50% graduated from college. By contrast, 21% of the respondents in the lowest category were dropouts, and only 3% graduated from college.

There is a very marked progression in the percentage of those with no post-high school education as one moves from the highest to lowest SEL category: from 1% to 12%, 22%, 39%, 58%, and finally, 76%. To put it another way, virtually all of those from the highest SEL category can count on some post-high school education, while only about one of four in the lowest category will obtain any higher education.

Parenthetically, it may be noted here that while SEL and educational attainment are obviously strongly related, SEL explains only 22% of the variance ($r = .47$), leaving 78% unexplained. This results from a fact which is clear in Figure 2-1, that within any level of SEL, there is considerable variability in educational attainment. The somewhat paradoxical condition of a strong relationship and a large amount of unexplained variance illustrates a basic problem in data analysis, namely, that the same relationship can be made to appear very strong, or not very strong, depending on how one looks at it. This same point is well made in Appendix C of Jencks (1972).

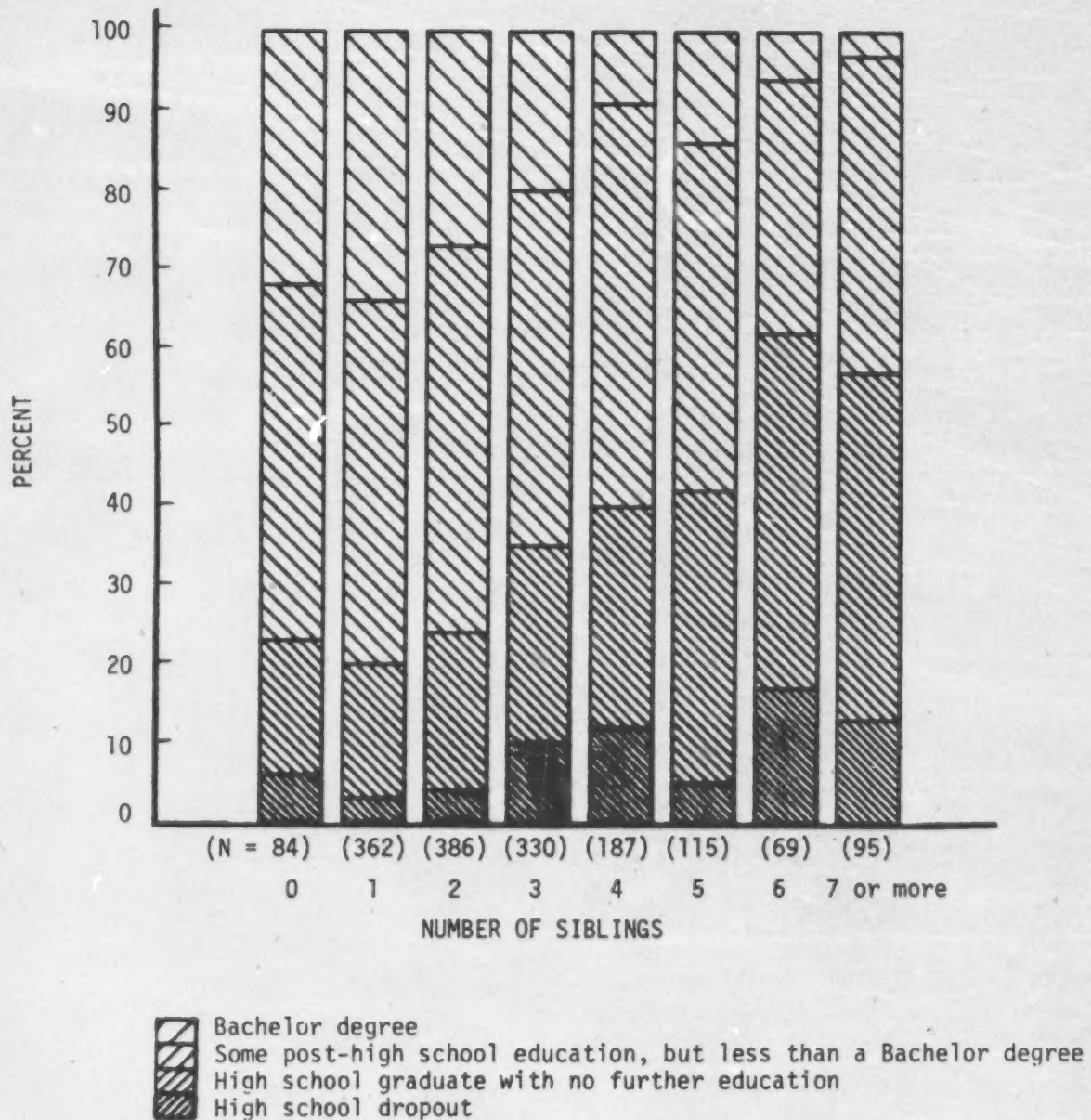
Family Size. The summary measure of SEL does not include all the dimensions of family background. One important additional dimension is family size--the number of siblings a respondent has. Figure 2-2 shows that this dimension also exhibits an association with educational attainment ($r = -.30$). Essentially, boys from larger families attain less education than those from smaller families. More than half of the boys with six or more siblings fail to obtain any post-high school education; but less than one-quarter of those with two or fewer siblings fail to obtain any.

Figure 2-1. Educational Attainment by Socioeconomic Level



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of socioeconomic level is .47.
The data underlying this figure can be found in Appendix E, Table E-2-1.

Figure 2-2. Educational Attainment by Number of Siblings



Note: The product-moment correlation between the eight-category measure of educational attainment and the number of siblings is $-.30$. The data underlying this figure can be found in Appendix E, Table E-2-2.

Family size is related to socioeconomic level, with smaller families being higher in SEL than larger ones ($r = -.32$). The question then arises whether the association between number of siblings and educational attainment is only indirect, reflecting the SEL-number of siblings association. We show later that this is not the case; we will see that the relationship is diminished when SEL is controlled, but it does not reduce to zero.²

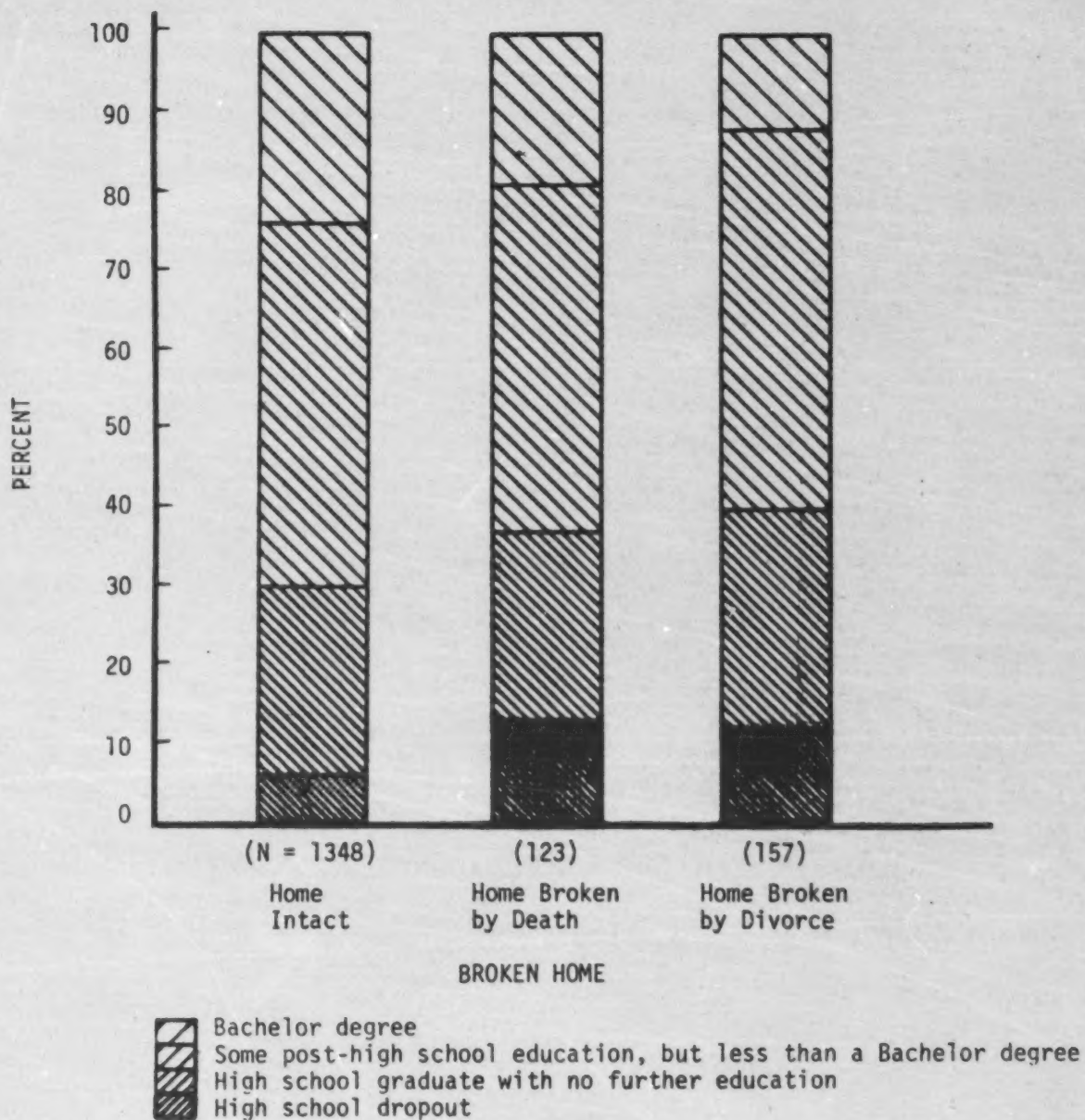
Broken Home. As one would expect, there is a clear disadvantage in coming from a broken home, whether broken by divorce or death. Such respondents are about twice as likely to drop out of high school as are those from intact homes (Figure 2-3).

As with number of siblings, at least some of the association is due to SEL; homes broken by divorce or separation are lower in SEL than intact homes. Homes broken by death, however, are not noticeably lower in SEL, so SEL cannot explain all of the relationship with educational attainment. As we shall see though, SEL plus other factors do account for virtually all of the relationship.

Parental Punitiveness. Regardless of whether a home is intact or not, an important background variable is the quality of relationships among family members. It was shown in Volume III (Bachman et al., 1970) that high scores on an index of parental punitiveness were associated with high dropout rates. The same relationship can be seen in Figure 2-4. There is a slight degree of curvilinearity, in that the very lowest group has a higher dropout rate than either of the next two lowest groups.³ The overall relationship is a modest one, and we shall see later that it is considerably reduced when controls are introduced.

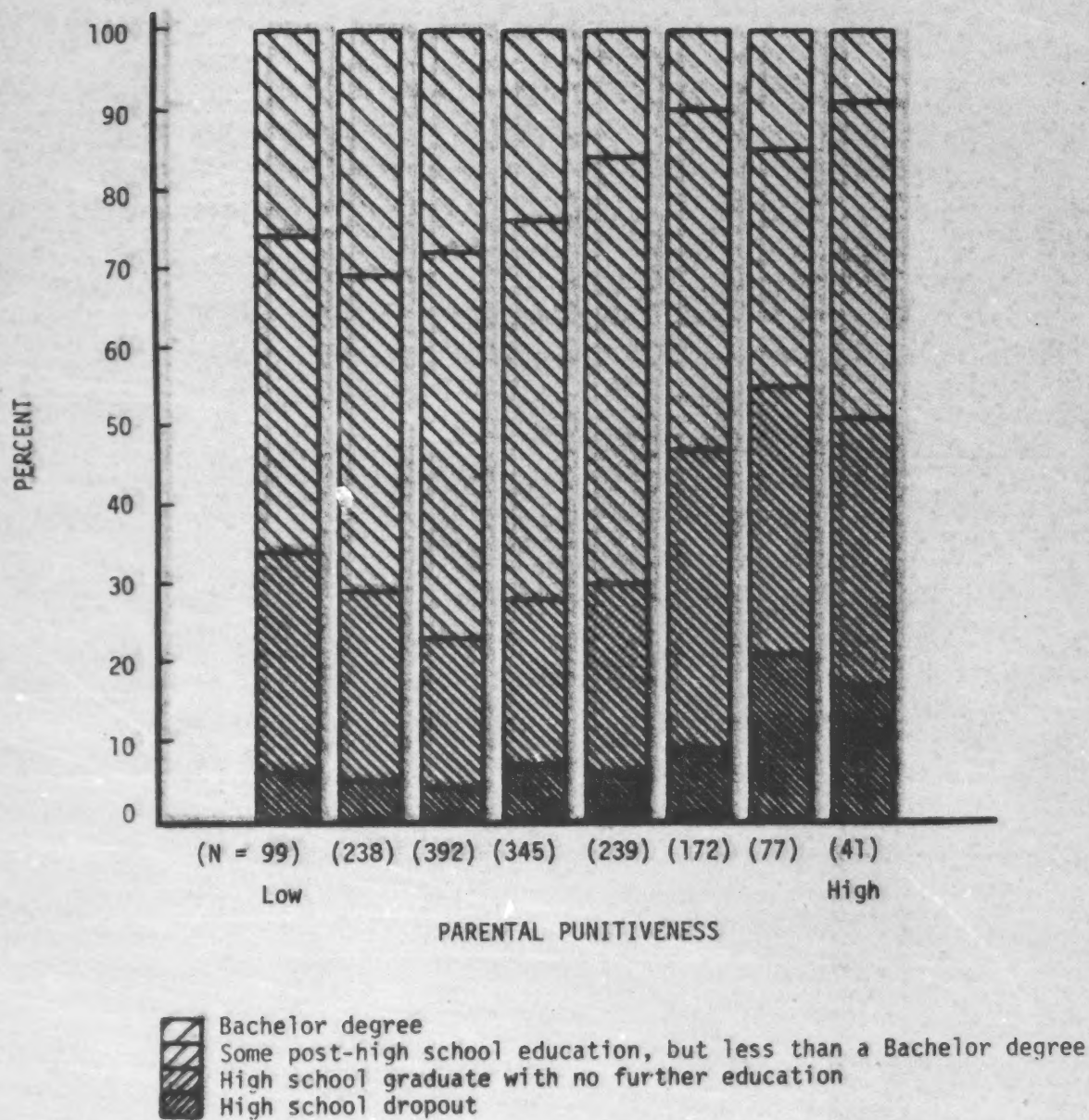
Religious Preference. Differences in educational attainment among the various family religion groups are not great; even these modest differences are substantially reduced when controls are introduced.⁴ As in Volume III, there is one exception to the previous statement: respondents from Jewish families attain a higher level

Figure 2-3. Educational Attainment by Broken Home



Note: The data underlying this figure can be found in Appendix E, Table E-2-3.

Figure 2-4. Educational Attainment by Parental Punitiveness



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of parental punitiveness is $-.20$.
 The data underlying this figure can be found in Appendix E, Table E-2-4.

of education than would be expected. None of the 54 Jewish respondents failed to obtain a high school diploma, and only one (2%) did not obtain at least some post-high school education. Sixty-five percent graduated from college. In the next highest attainment group, the Episcopalians, none was a high school dropout, and only 17% did not obtain any post-high school education. Thirty-one percent graduated from college. The Baptists attained the least education of the recognized religious groups: 10% dropped out of high school, and only 12% graduated from college. This variable is not at all appropriate for a product-moment coefficient; the eta is .28.

Race. Race is a very pervasive background factor. However, this study is not well-suited for analysis of race as a predictor. Analyses conducted for Volume II indicated that racial differences could not be accomplished simply by comparing blacks and whites:

Probably our most basic finding is the fact that the 256 black respondents in this study cannot be studied as a single subgroup. No less than three groups of blacks must be considered, based on different school (and community) environments: blacks in integrated schools, blacks in northern segregated schools, and blacks in southern segregated schools. . . . we first found in preliminary analyses that black students in integrated schools are very different from those in segregated schools in terms of test scores and socioeconomic level; we then found that those in southern segregated schools are quite different from those in northern segregated schools. Given these differences in socioeconomic level and test scores, we decided that these three black subgroups would be examined separately throughout the monograph. (Bachman, 1970, p. 198)

The three black subgroups, small in 1966, are very small indeed in 1974. In spite of the small frequencies, it can be clearly seen

in Figure 2-5 that blacks in segregated schools, both North and South, attain considerably less education than blacks in integrated schools. The latter are quite similar to whites in the level of attained education.

Urbanicity. The final background dimension looked at is the size of community where the respondent was brought up. There is rather little relationship with educational attainment, and we shall not be concerned with it further.

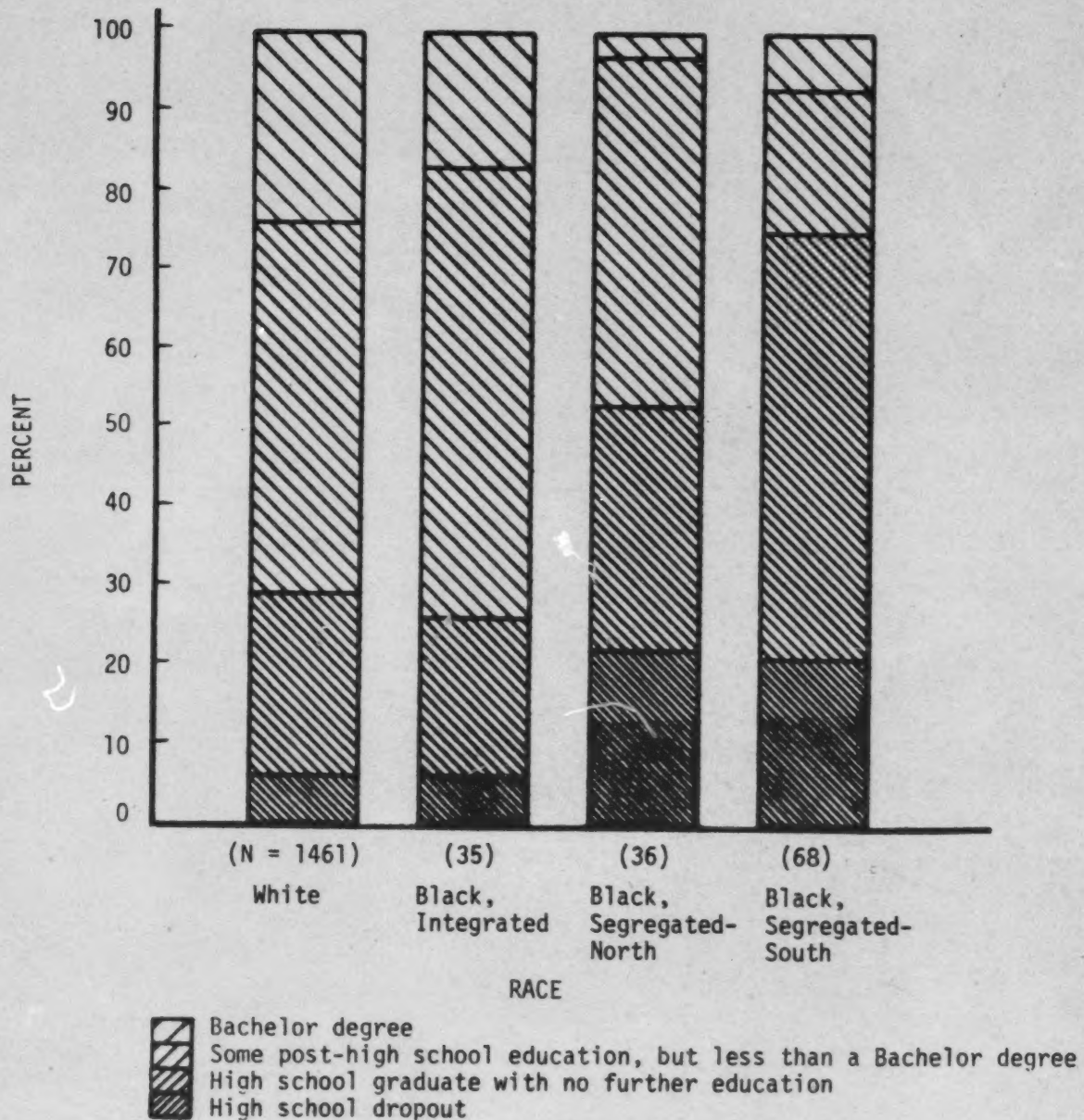
Intellectual Ability

Ability Composite. While family background is important for predicting educational attainment, most of us would assume (and hope) that intellectual ability is the prime determinant of how much education an individual obtains. The measure of intellectual ability which we will use is a composite of three tests: Quick Test; General Aptitude Test Battery, Part J (Vocabulary); and Gates Reading Test. The composite is an equally weighted mean of the three. It is superior to any one of the three, though there are slight and subtle differences among them. (See Volume III, pp. 40-46 for a discussion of the differences. All three tests, as well as the composite measure, are included in the large correlation matrix in Appendix G.)

Figure 2-6 shows the relationship between a five-category bracketed version of the ability composite and educational attainment. As expected, the relationship is quite strong and monotonic ($r = .53$). While 30% of the lowest ability group are high school dropouts, only 1% of the highest are. Only 2% of the lowest group graduate from college, while 24% of the highest group do.

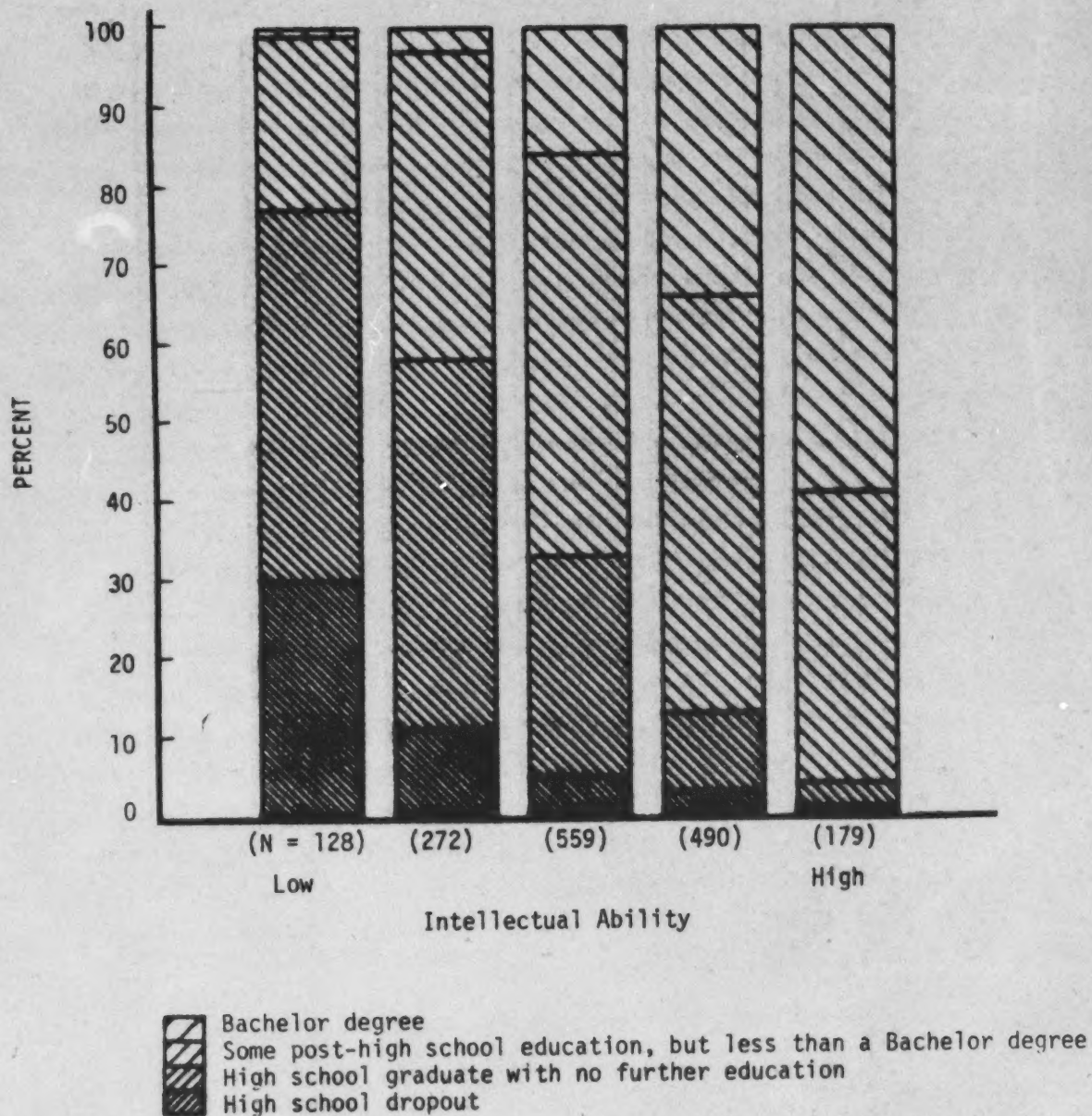
Multivariate Analysis. Family background and ability are clearly instrumental in attaining education. Let us now see how they interrelate in their predictive power. Using the correlations among the relevant variables in Appendix G, we regress educational

Figure 2-5. Educational Attainment by Race



Note: The data underlying this figure can be found in Appendix E, Table E-2-5.

Figure 2-6. Educational Attainment by Intellectual Ability



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of intellectual ability is .53.
The data underlying this figure can be found in Appendix E, Table E-2-6.

attainment on ability plus all the available background measures. The results are in Table 2-1, with the zero-order r 's for comparison.

Table 2-1

Multiple Regression Analysis Predicting Educational Attainment from All Background Variables and Ability

<u>Predictor</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Socioeconomic Level	.47	.261	11.05
Number of Siblings	-.30	-.098	4.44
Broken Home	.10	.032	1.56
Parental Punitiveness	-.20	-.102	4.97
Race:			
Black, Segregated, South	-.16	.077	3.30
Black, Segregated, North	-.11	-.015	0.70
Black, Integrated	-.00	.051	2.49
Region:			
West	-.04	-.024	1.01
Northcentral	-.02	-.039	1.54
Northeast	.11	.000	0.01
Rural/Nonrural	-.09	.005	0.22
Ability Composite	.53	.383	15.05

Variance Explained = 36.8% (adjusted = 36.3%)

From the table, it is clear that ability is the best single predictor of educational attainment, and it has the strongest direct effect on the eventual outcome. Still, background is by no means trivial; controlling ability does not reduce the effect of background to a negligible quantity. In other words, within each level of ability there is considerable advantage in having a better family background, especially in terms of high socioeconomic level, fewer siblings, and low parental punitiveness.

On a combination of empirical and a priori grounds, we have selected socioeconomic level, number of siblings, and the composite measure of ability as a small set of variables to be controlled in looking at later relationships. These three variables alone can explain 34.5% (adjusted for degrees of freedom) of the variance in educational attainment. By adding measures of broken home, parental punitiveness, race, region, and rural/nonrural, we could raise this figure to 36.3%. However, a great deal is lost; the first three variables are conceptually clear, often measured in a relatively standard way, and provide little doubt about causal priorities. The other variables suffer from various problems which considerably reduce their desirability as controls. For example, parental punitiveness is the sort of "soft" variable which may be subject to errors of memory; it is more difficult to conceptualize; and it is seldom measured, thus reducing comparability with other research. This is not to argue that it is an uninteresting variable. On the contrary, we believe the fact that it relates to educational attainment to be of interest. However, we do not wish to use it as a control for other variables with which the causal connections are quite unclear. For example, parental punitiveness correlates .28 with a measure of delinquent behavior in school. Does this imply that parents who use more punitive measures cause their children to misbehave more in school? Or do children who misbehave in school cause their parents to use more punitive measures? To use parental punitiveness as a control implies an affirmative answer to the former question, an assumption we do not care to make.

No such problem exists for socioeconomic level, number of siblings, and ability. The same may be said for the other candidates for control, but these are all of such predictive weakness that we need not be concerned with them. The one possible exception is the race variable; but as we indicated earlier, this study is not well suited for racial analyses and we prefer not to obscure our later analyses with arguably inappropriate controls.

Table 2-2 shows the regression results using only the three variables we will be routinely controlling. A comparison of Table 2-1 and 2-2 indicates that dropping down to three predictors results in a loss of only about 2 percent in explained variance. Moreover, the beta values for the three predictors are virtually identical in the two tables.

Table 2-2

Multiple Regression Analysis Predicting Educational Attainment
from Socioeconomic Level, Number of Siblings, and Ability

<u>Predictor</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Socioeconomic Level	.47	.257	10.92
Number of Siblings	-.30	-.090	4.11
Ability Composite	.53	.376	15.90

Variance Explained = 34.6% (adjusted = 34.5%)

We have seen thus far that family background and ability relate strongly to eventual educational attainment. But we have studied a great deal more about our respondents when they were in tenth grade. How do some of these other early factors relate to educational attainment? Let us first look at educational behaviors. We expect that early success in school surely ought to predict to later success. But we also want to see how much the background and ability variables previously looked at account for any observed relationship. It may be that factors of background and ability determine pre-high school behavior, and the latter may have no direct effect on attainment.

Following the same general plan as we used earlier, we will first look at each predictor bivariate, noting the shape and strength of relationship, and then move on to multivariate analyses.

Educational Behaviors

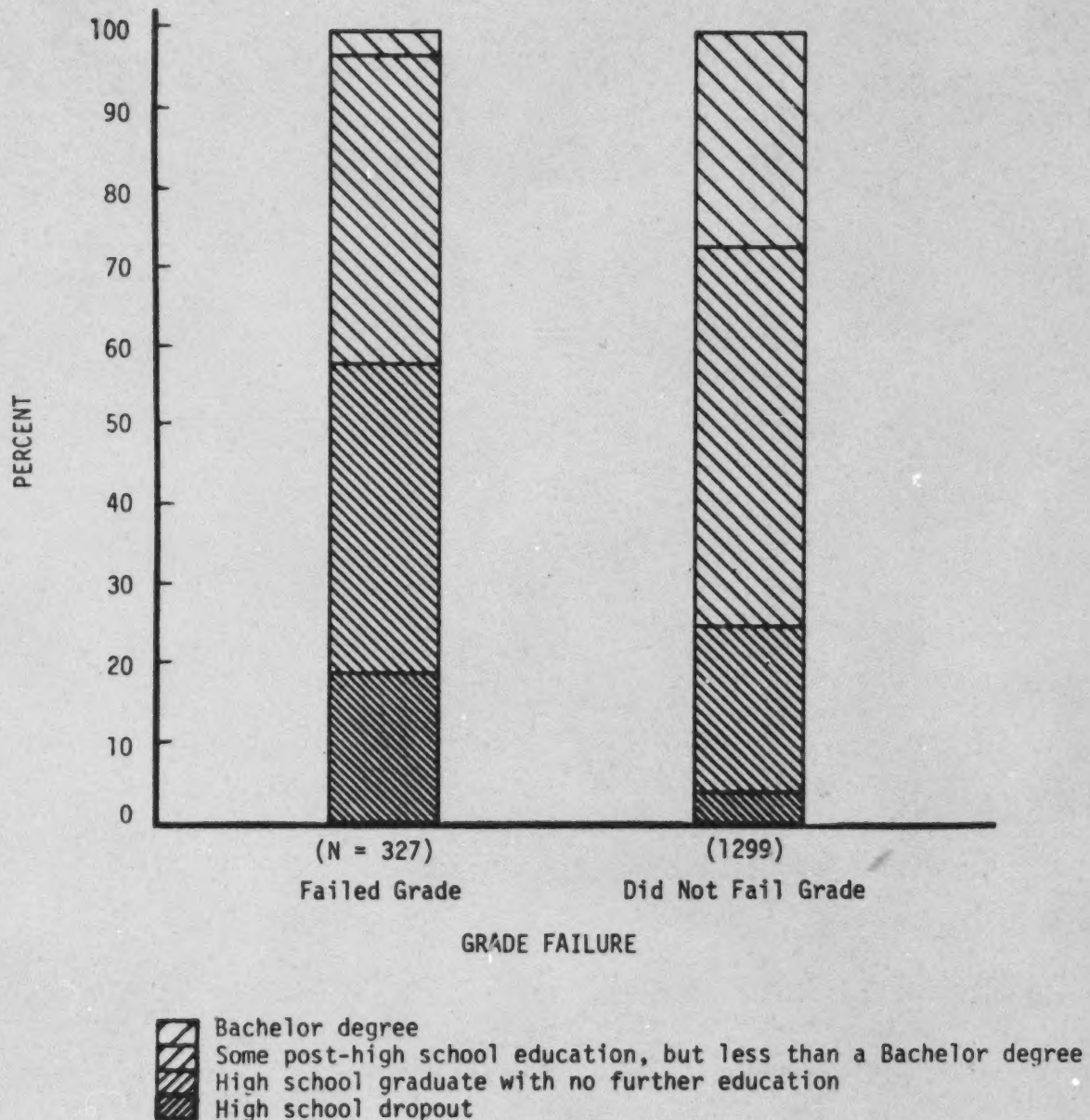
Grade Failure. It was demonstrated in Volume III that having failed a grade makes a respondent much more likely to drop out of high school. As Figure 2-7 shows, he is also likely to be considerably less well educated than the nonfailures five years after high school ($r = .35$). Fifty-eight percent of those held back cease their education with high school graduation or before, compared to 25% of those who never were held back.

Classroom Grades. High school dropouts don't come primarily from the ranks of the A students. In fact, of the 154 A students (in ninth-grade) in our study, only one failed to obtain his high school diploma. Two-thirds of the A students graduated from college. On the other end of the scale, 30% of the D students became dropouts, and another 39% obtained no further education after high school. Figure 2-8 displays the relationship ($r = .53$); no variable has a stronger correlation with educational attainment. (Ability has the same correlation of .53.)

There is, of course, no surprise in finding that early grades predict eventual attainment; what is of some interest is whether this relationship will survive controls for SEL, number of siblings, and ability.

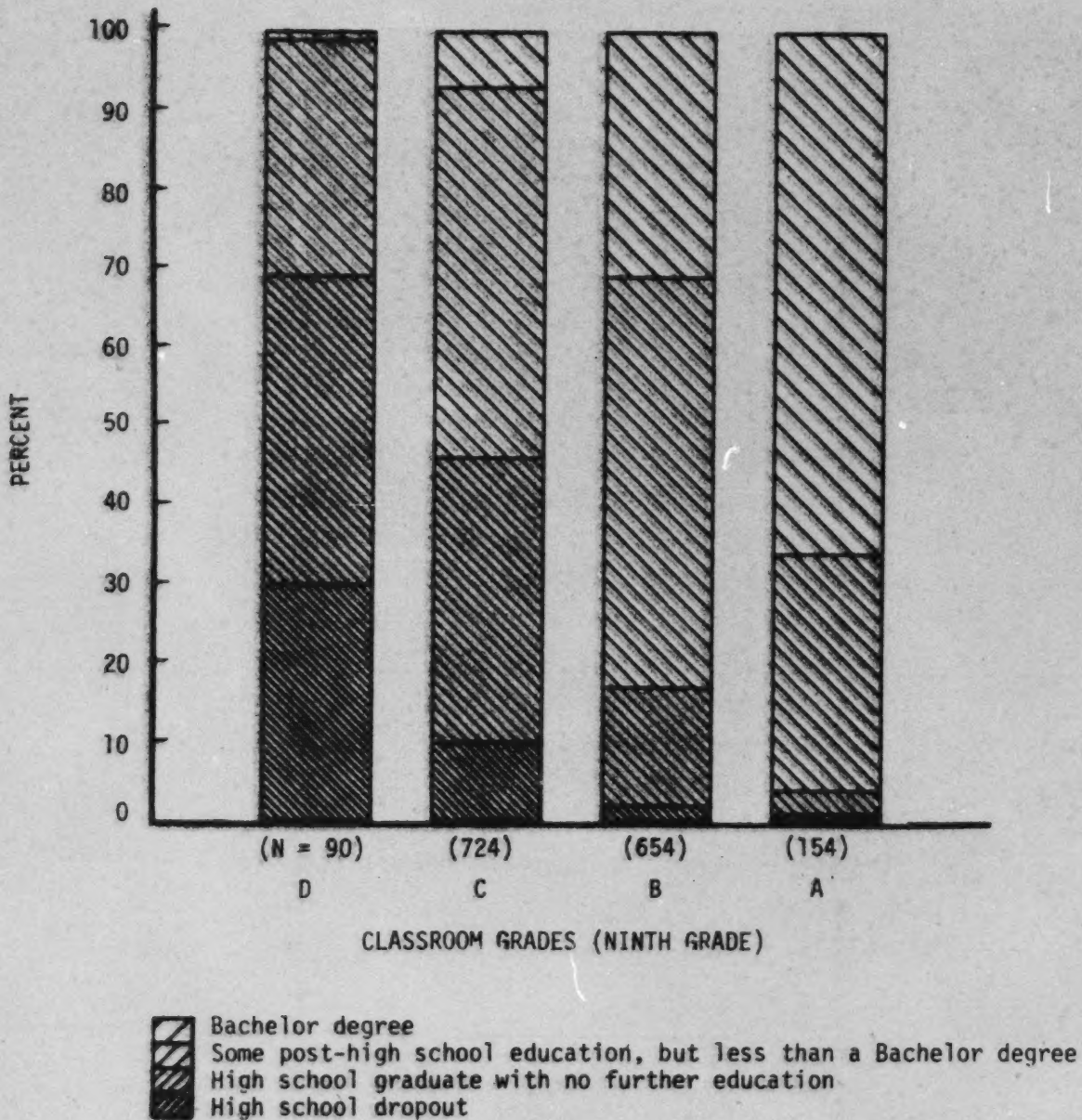
Hours of Homework. One might expect that the amount of time spent in tenth-grade in doing homework would be a strong predictor of later attainment. The association is, however, rather modest ($r = .16$). Among those who reported doing less than five hours of homework per week, only 10% later graduated from college; among those who put in five to nine hours the percentage is nearly double (19%). The tenth-graders who put in twenty to thirty hours per week are most likely to graduate from college (32%), but those who put in ten to nineteen hours are not far behind (27%).

Figure 2-7. Educational Attainment by Grade Failure



Note: The product-moment correlation between the eight-category measure of educational attainment and grade failure is .35
 The data underlying this figure can be found in Appendix E, Table E-2-7.

Figure 2-8. Educational Attainment by Classroom Grades



Note: The product-moment correlation between the eight-category measure of educational attainment and classroom grades is .53.
 The data underlying this figure can be found in Appendix E, Table E-2-8.

Rebellious Behavior in School. "A questionnaire segment consisting of 13 items asked respondents to report how frequently they engage in disruptive behavior in school, break rules, or do poor school work. The items covered such topics as fighting or arguing with other students, goofing off in class, skipping class, coming unprepared, copying assignments, and cheating on tests" (Bachman et al., 1971, p.69). The 13 items make up an index of rebellious behavior in school. (This index should not be confused with another to be used later, called delinquent behavior in school.)

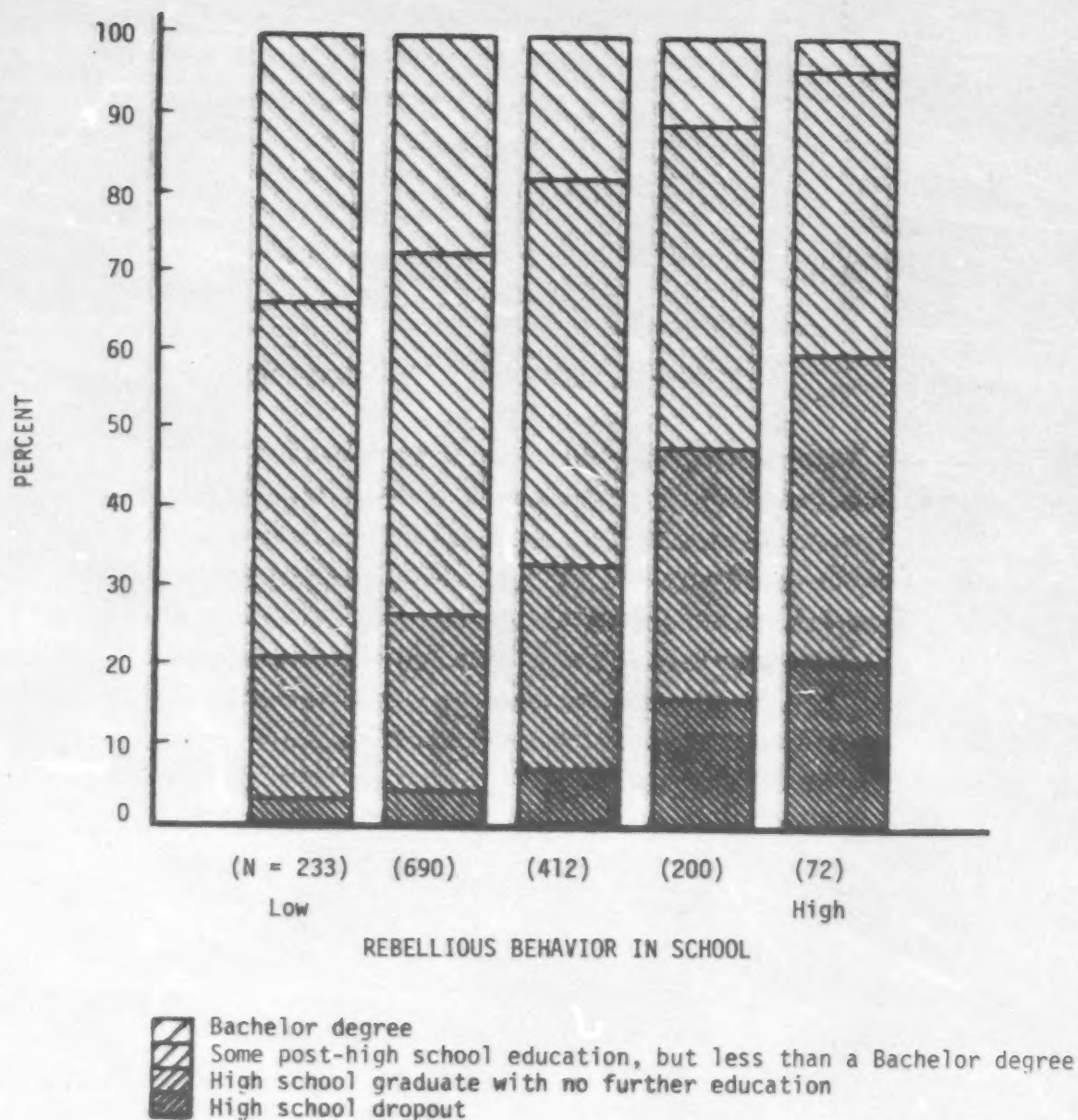
Figure 2-9 shows the relationship with educational attainment. The association is very regular; the more rebellious behaviors during high school the less education afterwards. Eighty percent of the least rebellious go on to some post-high school education; but only half that proportion of the most rebellious do so.

Program of Study. A boy's chances of completing college are very much enhanced by being in the college preparatory program in tenth grade. More than one of three (37%) of those in the college program in tenth grade actually obtain bachelor degrees by five years after high school. To put it a different way, 45% of the sample are in the college program in tenth-grade, but they represent 73% of those who obtain bachelor degrees. Most of the other bachelor degrees come from the general program.

Rather than the extended version of program of study shown in Figure 2-10, we will henceforth use only a dichotomy, college preparatory versus all others. The dichotomy correlates .45 with educational attainment compared to an eta of .47 for the extended version.

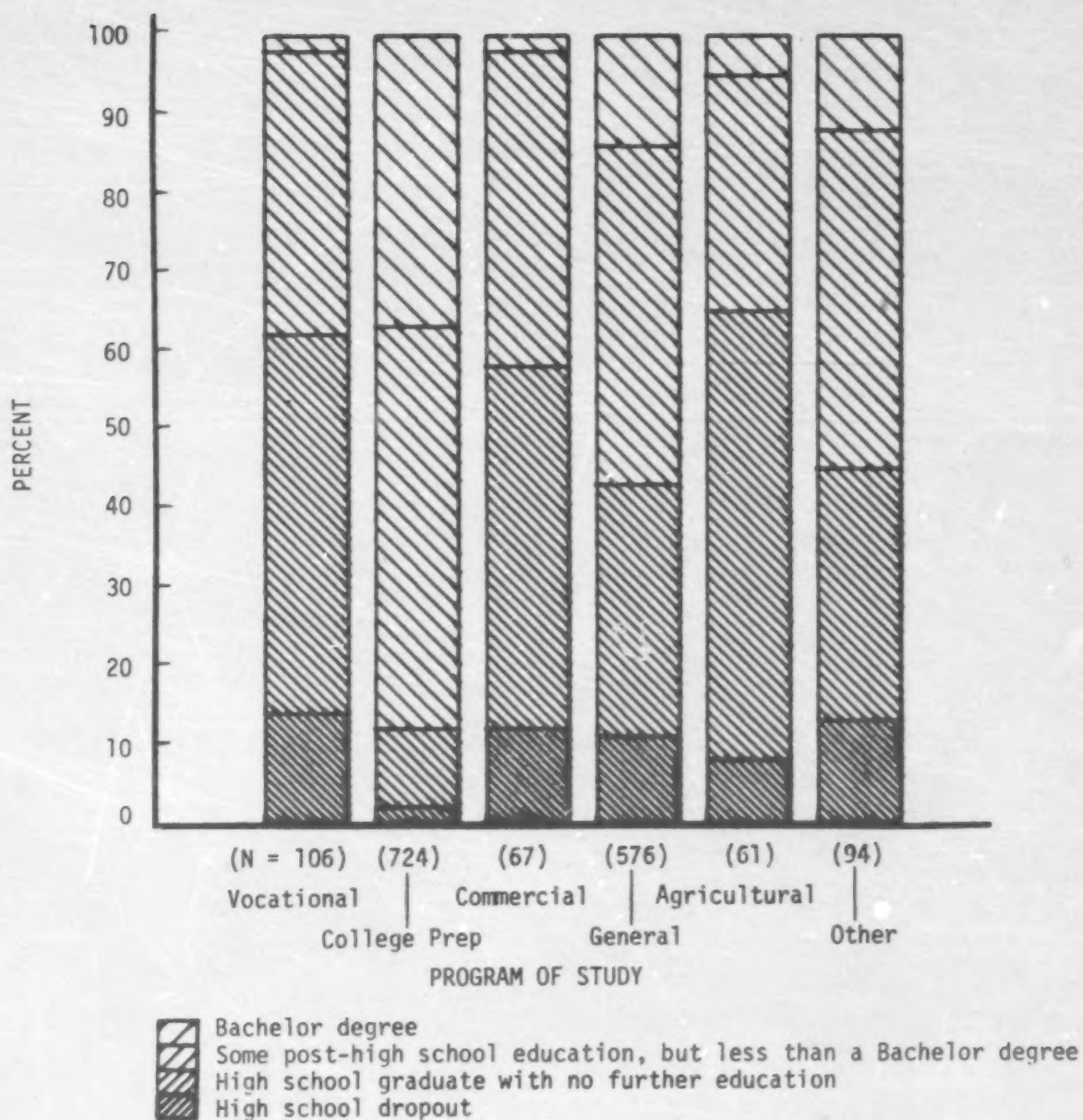
Multivariate analysis. In Table 2-3 are presented the results of a regression analysis which includes all the educational behaviors.

Figure 2-9. Educational Attainment by Rebellious Behavior in School



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of rebellious behavior in school is $-.29$.
The data underlying this figure can be found in Appendix E, Table E-2-9.

Figure 2-10. Educational Attainment by Program of Study



Note: The data underlying this figure can be found in Appendix E, Table E-2-10.

Table 2-3

Multiple Regression Analysis Predicting Educational Attainment
from Educational Behaviors

<u>Predictors</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Grade Failure	.35	.164	7.88
Average Grades: 9th year	.53	.346	15.22
Number of Hours of Homework	.16	.027	1.35
Rebellious Behavior in School	-.29	-.095	4.55
Curriculum	.45	.261	12.25

Variance explained = 38.9% (Adjusted = 38.8%)

All but the number of hours of homework seem to be of some value; but the more interesting question is what happens when background and ability are controlled. We assess the relative importance of the several variables by means of a step-wise regression. The three control variables are forced into the equation first; then the others are allowed to enter, one at a time, in order of marginal predictive importance. The process is continued until no variable has a beta whose t-ratio is greater than 1.96, the .05 level of statistical significance under an assumption of simple random sampling (and others). This is a very conservative criterion, in the sense that it will allow into the equation variables whose marginal contribution is very slight; but no great harm is done in looking at a few relationships that are statistically but not substantively significant.

Only one of the five educational behaviors (number of hours of homework) failed to enter the equation under these loose restrictions. The final equation is given in Table 2-4. Since this is the first table showing the results of a step-wise regression procedure, a few comments may be useful. Under the column headed "step-entered," a zero indicates that the corresponding predictor was forced

into the equation at the beginning. A "1" indicates that this variable (Average Grades: 9th Year) made the largest increment in the variance explained, and was the first educational behavior to enter the equation. Curriculum ("2") made the next largest contribution, and so on. The beta and t-ratio values reflect the values estimated in the last equation, with all seven predictors present. The adjusted variance explained is, strictly speaking, not statistically appropriate because the adjustment procedure does not take account of the step-wise means of arriving at the final equation. Nevertheless, we will use it as a rough guide, recognizing that it probably is slightly higher than it should be.

Table 2-4

Step-wise Multiple Regression Analysis Predicting
Educational Attainment from
Background, Ability, and Educational Behaviors

<u>Predictor</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.204	9.43
Number of Siblings	0	-.30	-.061	3.10
Ability Composite	0	.53	.177	7.40
Average Grades: 9th Year	1	.53	.271	12.33
Curriculum	2	.45	.146	6.93
Rebellious Behavior in School	3	-.29	-.094	4.87
Grade Failure	4	.35	.093	4.71

Variance Explained = 47.5% (Adjusted = 47.3%^a)

^a Step-wise regression procedures make this adjustment unreliable, since they violate some of the assumptions underlying it.

One interesting thing here is that the effect of ability is lessened very considerably in the presence of grades. In other words, ability operates through being translated into classroom achievements.

Ability does continue to have some direct effect, as does SEL, but grades are of primary importance. Note that with these seven tenth-grade variables we can account for nearly half (47%) of the variance in eventual educational attainment, up from about one-third (35%) with just background and ability.

Educational Plans, Values, and Attitudes

While early educational behaviors are primary determinants of educational attainment, there are less readily observed factors affecting the behaviors. These more "psychological" factors include plans, values, and attitudes. The most basic of these, as regards education, is the respondent's plans to go to college.

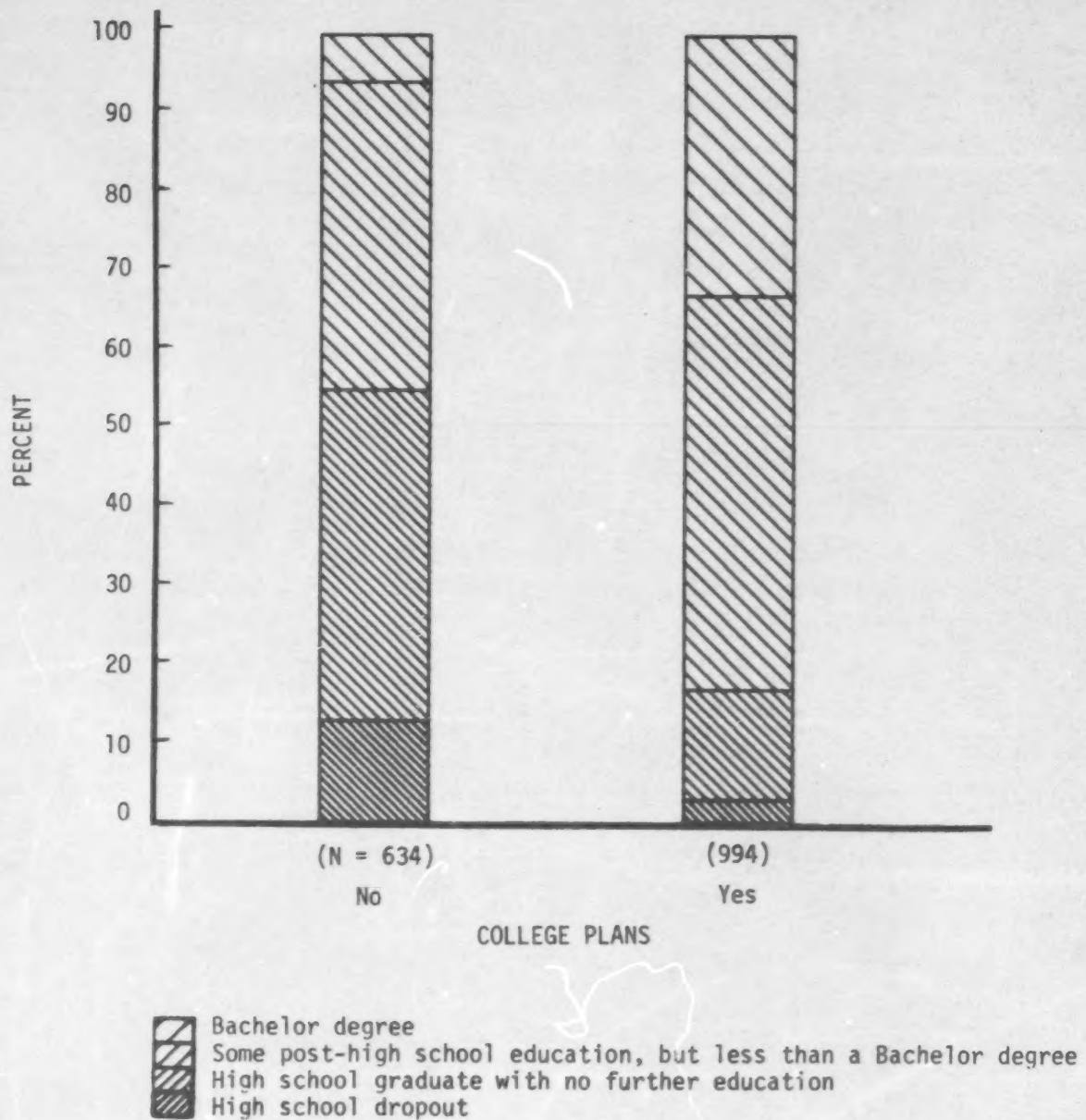
College Plans. Tenth-grade plans to go to college are often unfulfilled (Figure 2-11). About 17% of those planning to go as of tenth-grade stopped with a high school diploma; another 11% received only some vocational/technical training. One in three actually completed a four-year college degree by five years after high school. Change in the other direction--college attendance by those with no tenth-grade plans to attend--also occurs; 30% of those whose tenth grade plans did not include college actually did attend. But only 6% attained a bachelor degree. The correlation between tenth grade college plans and later educational attainment is .45, fairly strong for a dichotomy.

Interest in Courses. Individuals vary in how interested they are in school work. Naturally, the more interested attain more education. However, the relationship is quite modest ($r = .10$).

School Attitudes. A fundamental indicator of how well an individual fits into an educational environment is his attitude toward school and education. Our measures of attitude were described by Bachman (1970, pp. 106-108):

One portion of the group-administered questionnaire contained 27 items dealing with attitudes or

Figure 2-11. Educational Attainment by College Plans



Note: The product-moment correlation between the eight-category measure of educational attainment and college plans is .45.
The data underlying this figure can be found in Appendix E, Table E-2-11.

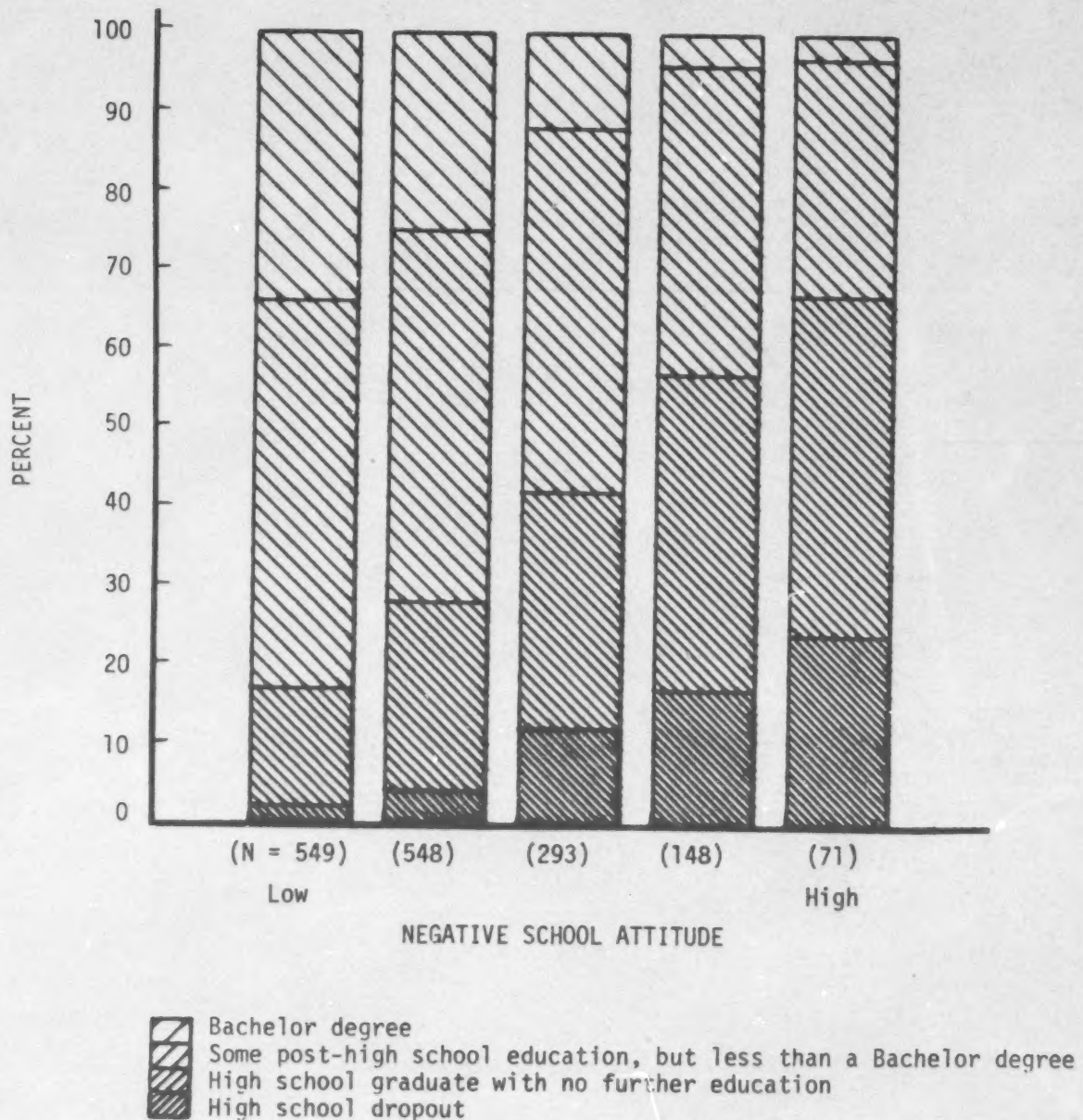
motivation toward school. Examination of the intercorrelations among these items in a pilot study led to the development of one index based on 15 items and another based on 8 items.

The first index, which we have termed *positive school attitudes*, contains items that stress the intrinsic value of education; for example, "I think school is important, not only for the practical value, but because learning itself is very worthwhile." Every one of the items is endorsed by at least three-quarters of the respondents, who say they feel this way either "pretty much" or "very much." It should be noted that the items possess a great deal of social acceptability--they sound like the right thing to say, and it may be that some of our respondents are inclined to tell us what they think we want to hear. Taken at face value, the data certainly suggest that most tenth-grade boys have favorable attitudes toward school.

The second index, termed *negative school attitudes*, consists of eight items ranging from general dissatisfaction ("School is very boring for me, and I'm not learning what I feel is important") to a devaluation of school in comparison to other sources of experience ("A real education comes from your own experience and not from the things you learn in school"). The items indicating general dissatisfaction received little endorsement, on the whole, while the items stressing the relative superiority of experience outside school were endorsed more often.

The two scales are of course inversely related; their product-moment correlation is $-.51$. The two show opposite relationships with educational attainment, with negative school attitudes being distinctly stronger ($r = -.39$ versus $.25$). As can be seen in Figure 2-12, two-thirds of those with the most negative attitudes have no post-high school education of any kind, and in fact, about one-fourth did not even finish high school. For the least negative group, 83% obtained some post-high school education.

Figure 2-12. Educational Attainment by Negative School Attitude



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of negative school attitude is $-.39$.
The data underlying this figure can be found in Appendix E, Table E-2-12.

Academic Achievement Value. Respondents were asked to indicate how much value they placed on: studying constantly, working hard for academic honors, striving for the top grades, studying hard for good grades. For tenth-grade respondents, answers to these questions provide some indication of eventual educational attainment ($r = .23$). Interestingly, responses to the same items in the twelfth-grade do not provide any such indication, r being .00.

Multivariate Analysis. When we put the five educational plans, values and attitudes measures together, we can account for 28% of the variance in educational attainment. In the stepwise regression, forcing SEL, number of siblings, and ability to enter the equation first, we can explain 43% by adding college plans, negative school attitudes, and positive school attitudes (see Table 2-5).

Table 2-5

Step-wise Multiple Regression Analysis Predicting
Educational Attainment from
Background, Ability, and Educational Plans and Attitudes

<u>Predictor</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.202	9.08
Number of Siblings	0	-.30	-.087	4.27
Ability Composite	0	.53	.272	11.66
College Plans	1	.45	.212	10.14
Negative School Attitudes	2	-.39	-.154	6.64
Positive School Attitudes	3	.25	.072	3.25

Variance Explained = 43.6% (Adjusted = 43.4%)

After controls, the educational plans and attitudes of tenth-graders are strongly related to eventual attainment. Note that college plans, a dichotomy, is no less strong a predictor than SEL

(betas = .212 and .202). By using a number of observable behaviors, along with background and ability, we were able to account for 47% of the variance (Table 2-4); we see here that we do nearly as well with the non-behavioral measures.

Self-Concepts

It is important to know not only how a boy feels about school, but how he sees himself, particularly as compared to his peers. We asked several questions designed to determine these self-concepts.

Self-concept of School Ability. While one's ability and grades ought to be effective determinants of one's self-concept of school ability, there is a good deal of variation which is unexplained by those factors. (The multiple-R is .626, which leaves 61% of the variance unexplained.) In spite of feedback to the contrary, most of us think of ourselves as better than average, rather than below average. In fact, over 80% of our 1966 respondents rated themselves as better than average in school ability. In the absence of an "average" point on the response scale, the great majority of those with near average ability apparently perceive themselves as being slightly above average.

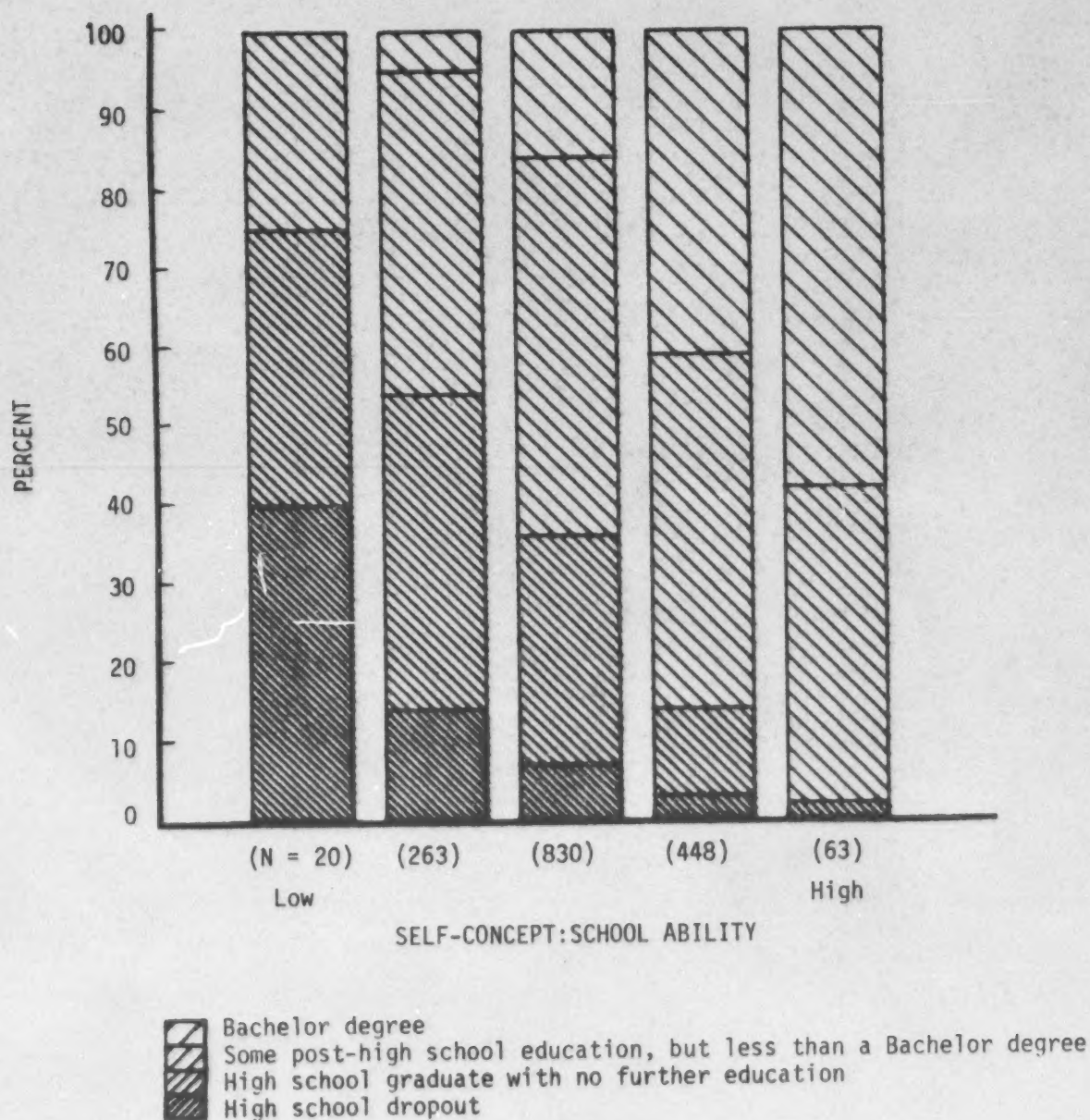
The measure predicts eventual education fairly well, as Figure 2-13 shows ($r = .45$).⁵ Only 44% of those who rate themselves below average (in most cases, "slightly" below) obtain any post-high school education, and only 4% of them finish college. In contrast, the corresponding figures for the above average groups are 74% and 26%.

Other items asked the respondent for these self-ratings:

(1) "How close do you come to doing the best work you are able to do in school?"; (2) "How hard do you think you work in school compared to the other students in your class?"; and (3) "How satisfied are you with the way you're actually doing in school?".

These three items relate to educational attainment, but not very strongly. The first is the weakest ($r = .14$), with those who

Figure 2-13. Educational Attainment by Self-Concept:School Ability



Note: The product-moment correlation between the eight-category measure of educational attainment and self-concept of school ability is .45. The data underlying this figure can be found in Appendix E, Table E-2-13.

come close to doing their best being generally higher in attainment, except that those who come "very close" attain a bit less than those who come "quite close." A similar pattern is evident in the second item (Figure 2-14, $r = .25$); those who say they work harder than the other students generally attain more education, except that those who work "much harder" attain somewhat less than those who work "harder" (r is .25; η is .28). Finally, those who are more satisfied with the way they are doing in school attain more education ($r = .19$).

Self-esteem. A final measure of self-concept is self-esteem, about which we will have considerable to say in Chapter 5. Here we note that it correlates .27 with eventual attainment. The relationship is quite regular. Almost half (46%) of those lowest in self-esteem finish their education with a high school diploma or less; almost nine of ten (88%) in the highest self-esteem category continue their education beyond high school. Only 13% of the lowest group attain bachelor degrees, compared to 43% of the highest group.

Multivariate Analysis. Combining the five self-concepts measures in a single equation gives the results in Table 2-6

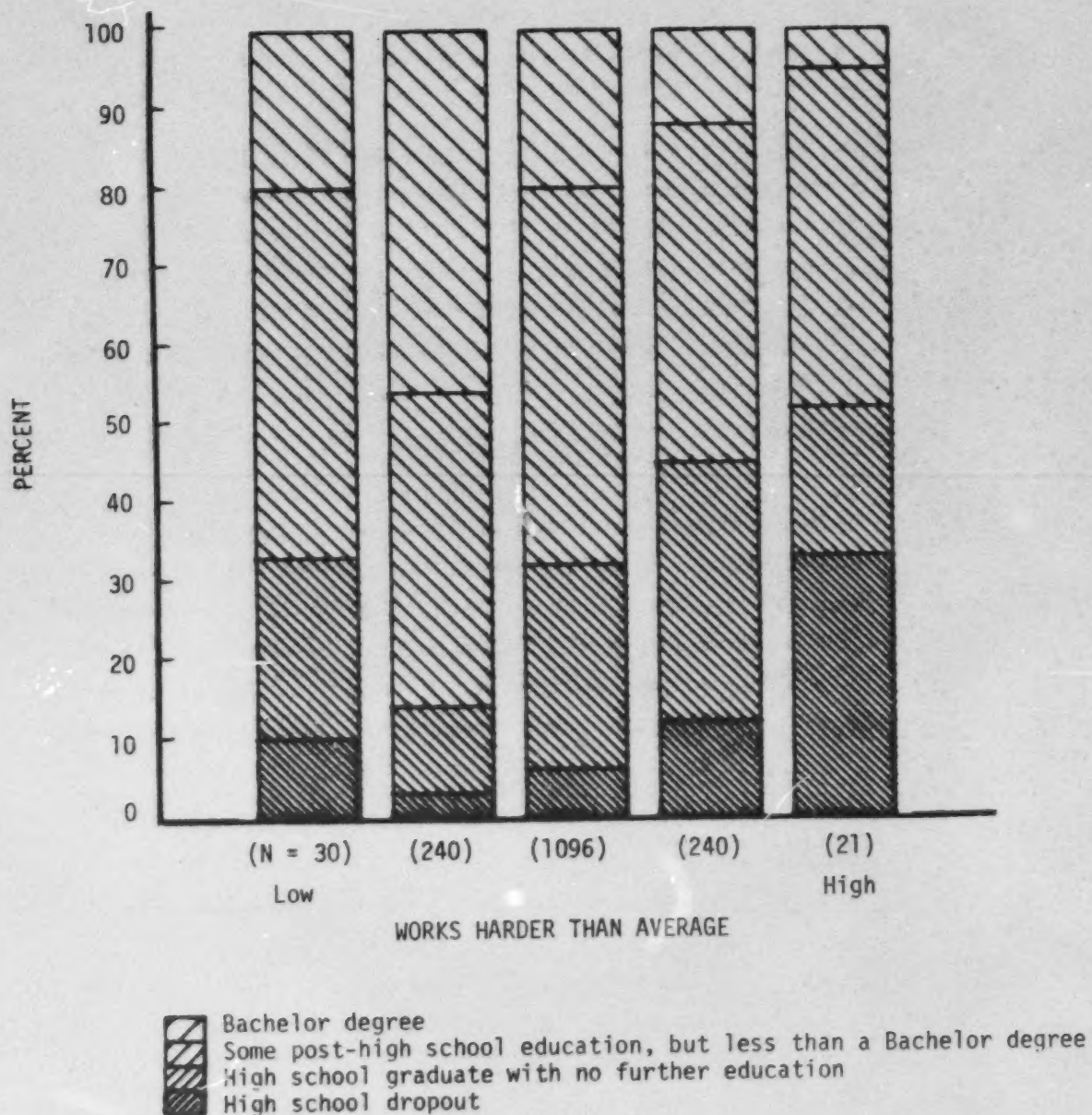
Table 2-6

Multiple Regression Analysis Predicting Educational Attainment
from Self-concepts

<u>Predictor</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Self-concept of School Ability	.45	.367	15.27
Does Best Work in School	.14	-.003	0.12
Works Harder than Average	.25	.126	5.19
Satisfaction with School Work	.20	.062	2.52
Self-esteem	.27	.107	4.44

Variance Explained = 23.7% (Adjusted = 23.4%)

Figure 2-14. Educational Attainment by Works Harder Than Average



Note: The product-moment correlation between the eight-category measure of educational attainment and works harder than average is .25. The data underlying this figure can be found in Appendix E, Table E-2-14.

The self-concept of school ability obviously carries the lion's share of the prediction; alone, it explains 20.3%. Still, the item which taps how hard the respondent sees himself as working relative to the others is not trivial, nor is global self-esteem. From the data in Table 2-6, we would not be surprised if only the three variables whose beta coefficients exceed .10 were to enter the step-wise regression. But in fact, all five do so (Table 2-7).

Table 2-7

Step-wise Multiple Regression Analysis Predicting Educational Attainment from Background, Ability, and Self-concepts

<u>Predictor</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.230	10.09
Number of Siblings	0	-.30	-.085	4.04
Ability Composite	0	.53	.287	11.16
Self-concept of School Ability	1	.45	.120	4.82
Works Harder than Average	2	.25	.088	4.08
Self-esteem	3	.27	.087	4.07
Does Best Work in School	4	.14	.057	2.49
Satisfaction with School Work	5	.20	.048	2.17

Variance Explained = 40.1% (Adjusted = 39.8%)

Now, obviously; several of these contributions are quite small. Still, it is theoretically interesting that the beta coefficient for the item about doing the best work increases from -.003 to .057. This suggests that, after controlling for background and ability, the role of self-perception of how close one comes to doing one's best becomes strengthened.

Note that by using self-concepts as additional predictors, we can explain 40% of the variance in educational attainment, an appreciable increase over the 35% explained by background and ability alone.

Motives and Affective States

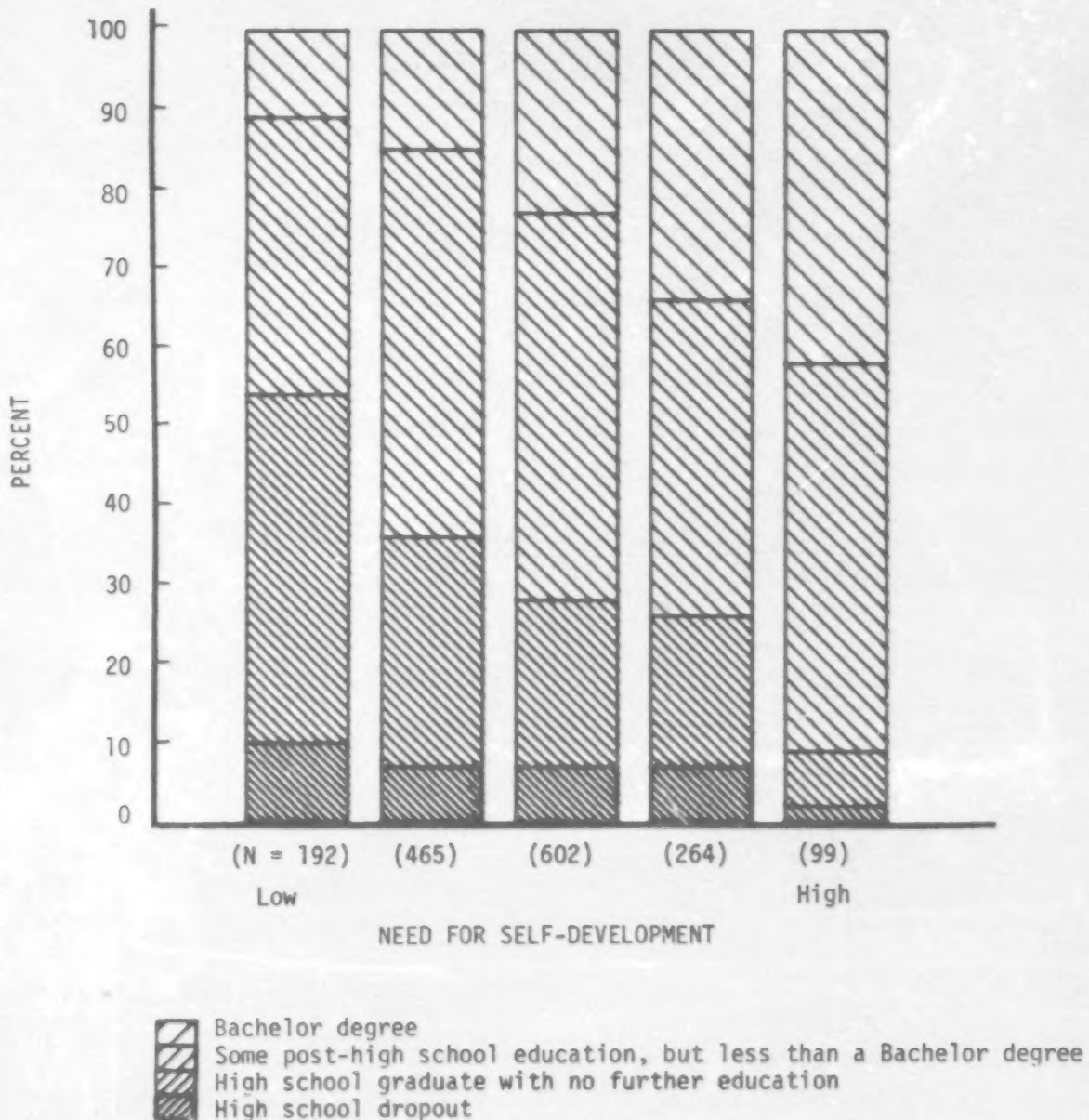
Let us turn now from variables which are closely related to education to a set of variables which are much less proximal. They are a rather varied assortment, subsumed under the rubric of motives and affective states.

Need for Social Approval. Our measure of the need (or motive) for social approval is adapted from the Crowne-Marlowe social desirability scale, which "attempts to locate individuals who describe themselves in favorable, socially desirable terms in order to achieve the approval of others." (Robinson and Shaver, 1973, p. 727.) There is no particular a priori reason to expect that this variable should relate to educational attainment, and in fact, its correlation is .00. We will not deal with it further, except in the multivariate analyses.

Test Anxiety. One would expect test anxiety to relate to educational attainment. Our measure of test anxiety is an adaptation from the Mandler-Sarason Test Anxiety Questionnaire. This latter has been used by Atkinson (1964) as a measure of the need (or motive) to avoid failure. High levels of test anxiety would presumably indicate a negative affect associated with schooling, so the expectation is that test anxiety should be negatively associated with attainment. That expectation is borne out, the correlation being $-.16$.

Need for Self-development. This dimension of personality was assessed via 15 questionnaire items, an example of one of which is: "I look for opportunities to better myself." Figure 2-15 shows a moderate relationship between this variable and educational attainment ($r = .23$). Educational attainment is considerably higher for those who express a high need for self-development; 41% of the highest category earned bachelor degrees, compared to only 11% of the lowest. A closely related variable attempted to measure a conceptually distinct need for self utilization. However, this measure correlates $.71$ with the need for self-development, and shows essentially the same pattern of relationship as the latter, though slightly weaker ($r = .21$).

Figure 2-15. Educational Attainment by Need for Self-Development



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of need for self-development is .28.
 The data underlying this figure can be found in Appendix E, Table E-2-15.

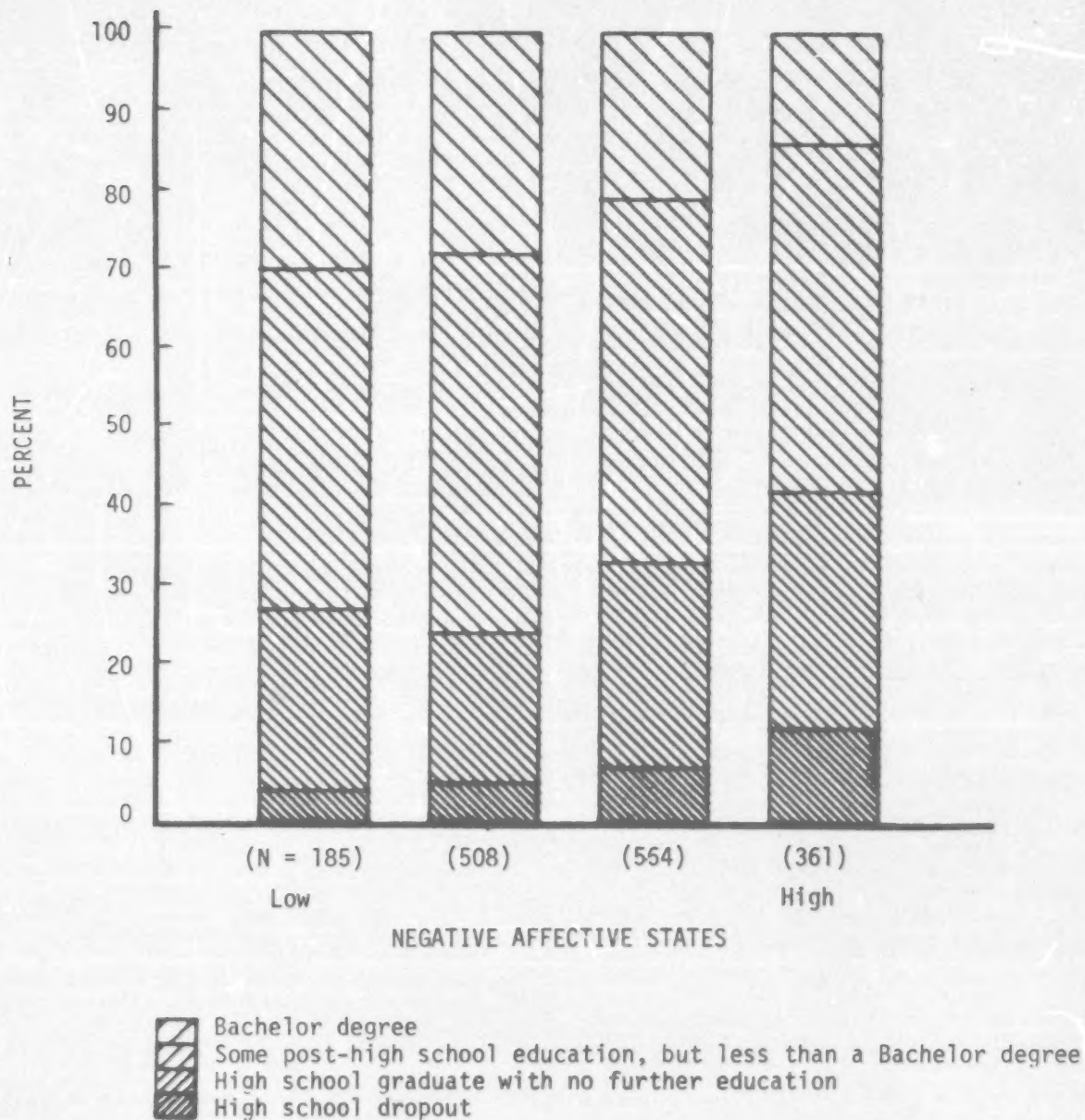
Happiness and Negative Affective States. Two opposite poles of affect are indexed by two variables: happiness, a composite of six items, and negative affective states, a composite of six indexes, based on a total of 40 items. The six component indexes at the negative end of affect are attempts to measure dimensions of irritability, general anxiety, anxiety and tension, depression, anomie, and resentment. (See Bachman, 1970, for more details.)

Happiness is positively correlated with educational attainment ($r = .13$), while negative affective states correlates negatively ($r = -.17$). Figure 2-16 shows the latter relationship. The two groups with lower scores are quite similar to each other; the two rather substantial groups which scores high on this variable have distinctly less education. Only 14% of the group which reported the most negative affective states later completed college, compared to about 30% of the two groups lowest in negative affect.

Somatic Symptoms. Respondents were asked to indicate the frequency with which they suffered from eighteen different complaints. Many of the items are better termed psychosomatic, since they ask about such symptoms as nervousness, upset stomach, nightmares, and difficulty getting to sleep. These are rather negative conditions, and in fact the index correlates .56 with the index of negative affective states. The somatic symptoms index shows a stronger relationship with educational attainment, $r = -.25$ (Figure 2-17). More than 20% of those reporting the highest frequency of symptoms drop out of high school, compared to only 2% of those reporting the lowest.

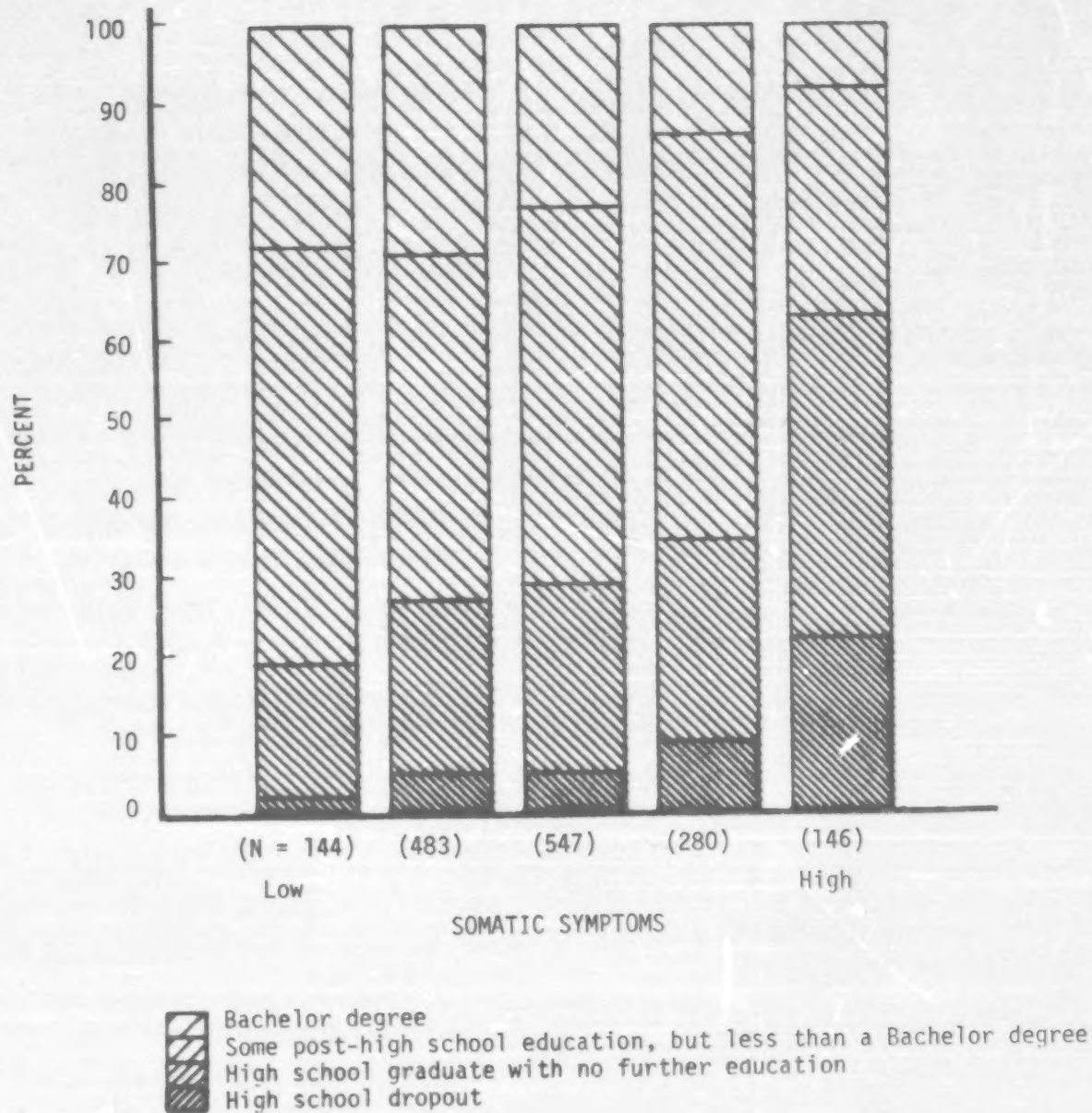
Impulse to Aggression. A final negative dimension is a scale dealing with something we call impulse to aggression. "I feel like picking a fight with my parents" is a sample of the four ingredient items. This scale correlates .54 with negative affective states, and-- just as does negative affective states--it correlates $-.17$ with educational attainment.

Figure 2-16. Educational Attainment by Negative Affective States



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of negative affective states is $-.17$.
 The data underlying this figure can be found in Appendix E, Table E-2-16.

Figure 2-17. Educational Attainment by Somatic Symptoms



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of somatic symptoms is $-.25$.
The data underlying this figure can be found in Appendix E, Table E-2-17.

Multivariate Analysis. The motives and affective states are less strongly associated with educational attainment than were the previous sets of variables. All eight combine to account for only 16% of the variance. The strongest are need for social approval (beta = $-.178$), need for self-development (beta = $.247$), somatic symptoms (beta = $-.173$), and impulse to aggression (beta = $-.123$).

In the step-wise procedure, these same four are added to background and ability (Table 2-8). Note that these motives and affective states do add substantially to the prediction of educational attainment. The best of them, added to the background and ability variables, raise the predictive power from 34.5% to 39.6%.

Table 2-8

Step-wise Multiple Regression Analysis Predicting Educational Attainment from Background, Ability, and Motives and Affective States

<u>Predictor</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.251	11.09
Number of Siblings	0	-.30	-.094	4.46
Ability Composite	0	.53	.321	13.43
Impulse to Aggression	1	-.17	-.150	6.45
Need for Self-development	2	.28	.138	6.78
Somatic Symptoms	3	-.25	-.079	3.62
Need for Social Approval	4	.00	-.047	2.03

Variance Explained = 39.9% (Adjusted = 39.6%)

Social Values and Attitudes

We now turn to a set of variables we call "social values and attitudes." They are a diverse set, but they generally have to do with attitudes held by the respondents about the social system and its institutions.

Social Values. The first of the social values is something we call "social values cluster." This is a composite of six indexes based on a total of 33 items. The items are designed to tap values that are highly approved in the United States. The six indexes measure the value of the attributes of honesty, kindness, reciprocity, self-control, social responsibility, and social skills. A high score on the social values cluster would indicate that the respondent endorses these attributes as desirable, "good things for people to do."

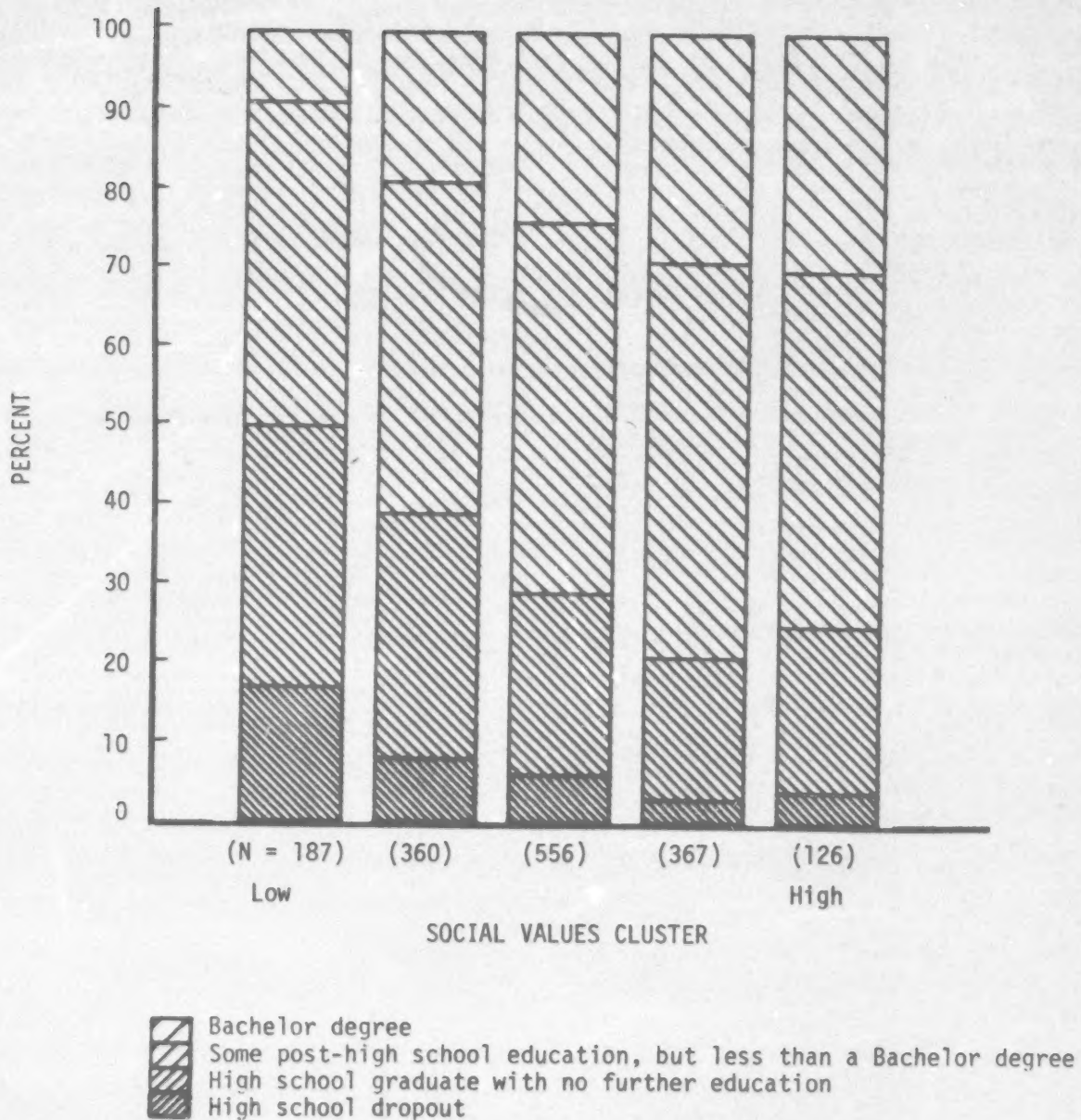
There is a moderate relationship between this variable and educational attainment (Figure 2-18, $r = .23$). Under 10% of the lowest group attain a bachelor degree; over 30% of the highest group do.

Internal Control. Internal control refers to a generalized belief in internal control of reinforcements, that a person's own actions determine his lot in life. A low score on the dimension of internal control indicates a belief in external control--that one's fate is contingent on factors beyond one's control, such as luck or change. Another term that has been used is "personal efficacy."

The sense of internal control is positively correlated with educational attainment ($r = .25$). The display in Figure 2-19 indicates some curvilinearity; the very lowest category breaks the monotonic pattern. It is, however, comprised of only 135 cases, so the departure is not severe. That the curvilinearity is slight is supported by the fact that the eta value is also .25.

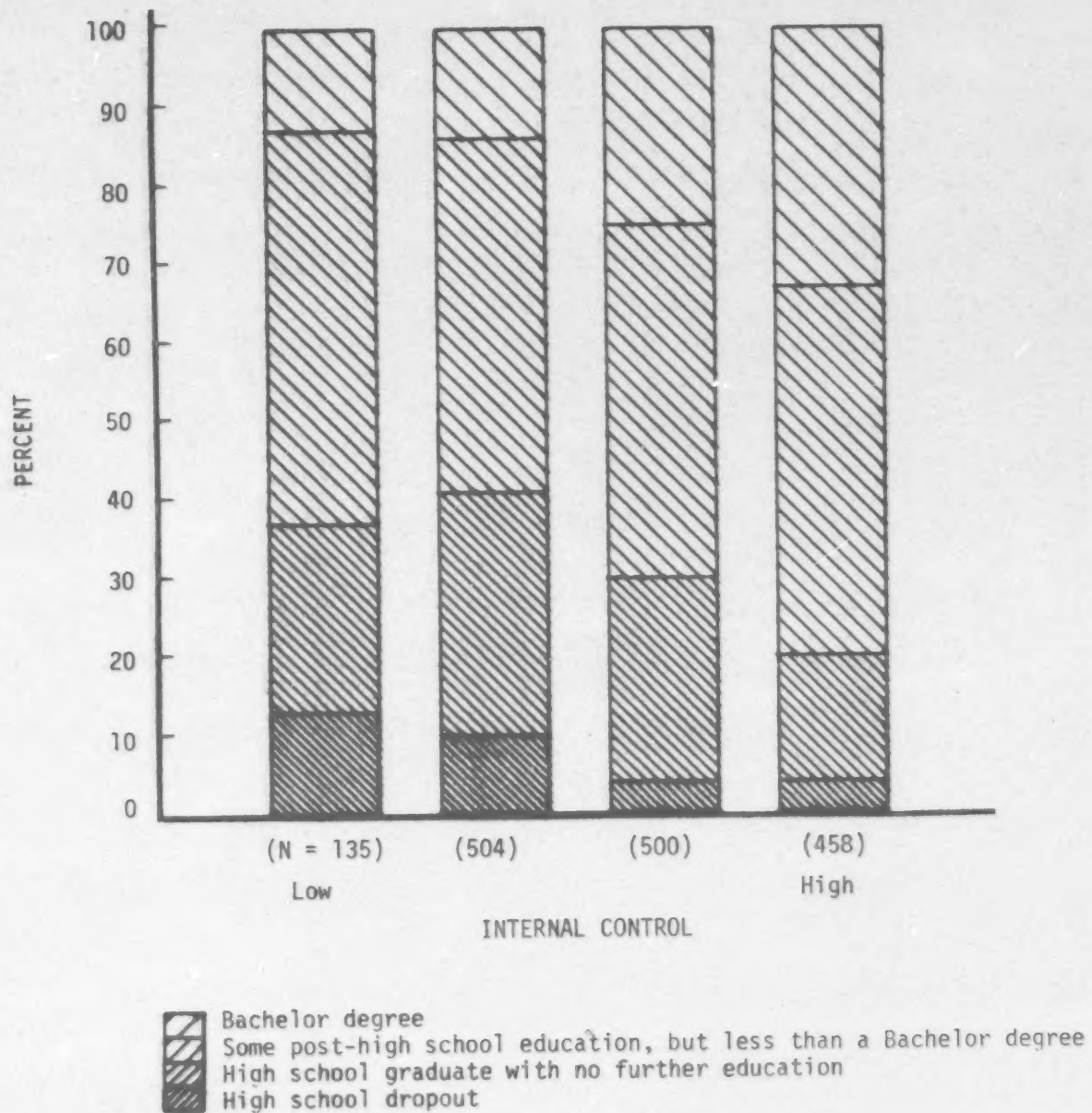
Trust. Two measure of trust were obtained, the first refers to people in general, and the second to government. These show rather little relationship with educational attainment (r 's = .06 and .13, respectively). It should be recalled that in this chapter we are using 1966 measures to predict later attainment. One should not infer from the correlation of .13 between educational attainment and trust in government that the more educated members of our society

Figure 2-18. Educational Attainment by Social Values Cluster



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of social values cluster is .23.
 The data underlying this figure can be found in Appendix E, Table E-2-18.

Figure 2-19. Educational Attainment by Internal Control



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of internal control is .25.
The data underlying this figure can be found in Appendix E, Table E-2-19.

tend to be more trusting of our political institutions. As we shall see in Chapter 6, this is not true for this cohort. Rather, the correlation implies that among high school sophomores, the more trusting will attain more education.

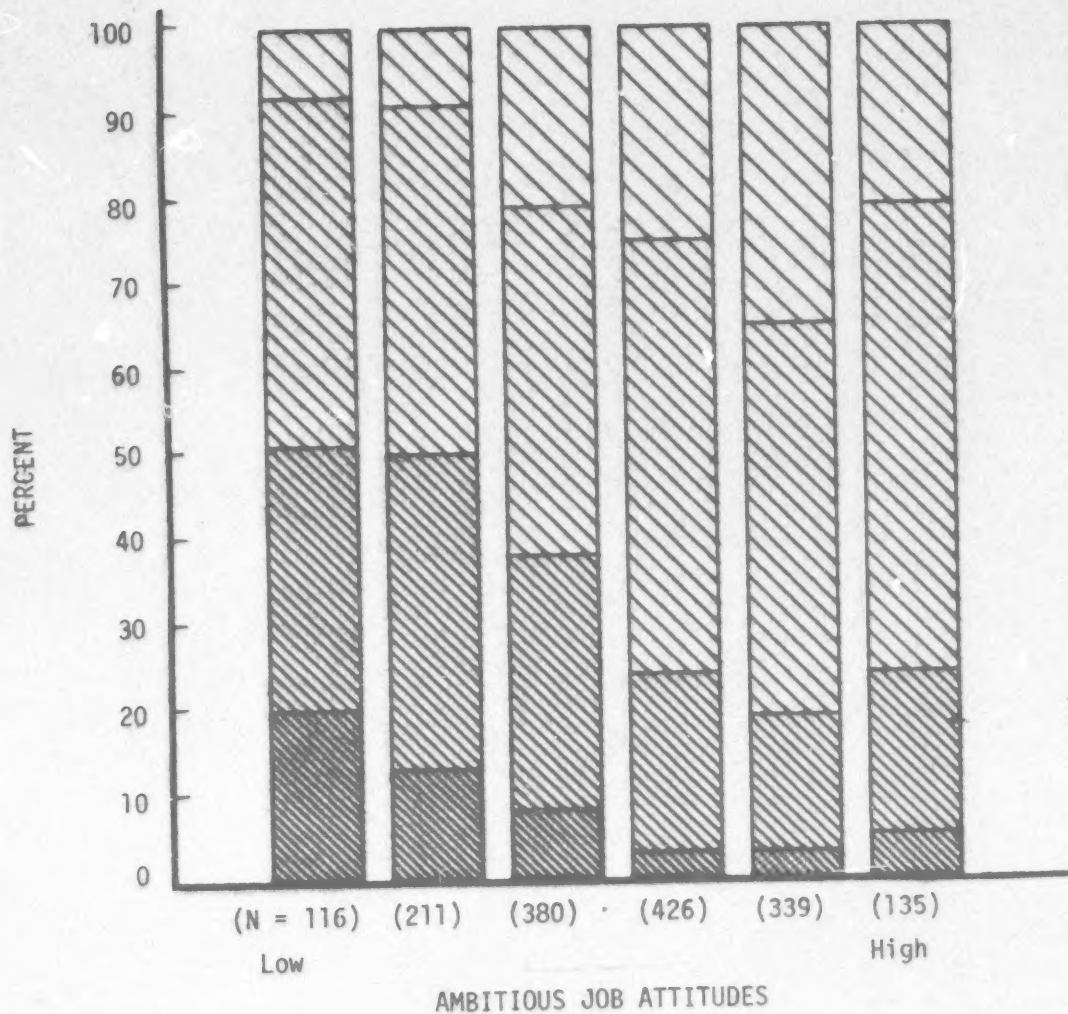
Multivariate Analysis. The social values and attitudes comprise the weakest predictor set thus far. The five combine to explain only 9.2% of the variance in educational attainment. When added to background and ability, all but trust in people enter the equation. However, none has a beta greater than .08, and the total additional variance explained over background and ability is only 1.7%.

Occupational Attitudes and Aspirations

While early educational attitudes and aspirations ought to be closely linked to educational outcomes, the same is true for occupational attitudes and aspirations. In fact, it is not unlikely that in many cases the occupational aspiration is prior to the educational. The decision to become a doctor necessitates the decision to go to college. And a decision to become a rock musician probably lessens the aspiration for college.

Ambitious Job Attitudes. This scale, which is discussed extensively in Chapter 8, tries to measure how ambitious the respondent is occupationally. It weights positively items dealing with learning new things and getting ahead, and weights negatively items dealing with working too hard, or being bossed. The moderately strong association with educational attainment is displayed in Figure 2-20. There is the expected positive relationship ($\bar{r} = .27$) overall, with a departure from monotonicity at the highest level. The degree of departure from linearity is not large; eta is .29. The lowest group has less than 10% completing college, compared to 35% for the next-to-highest. The highest falls back to 20%. We may speculate that those indicating very ambitious job attitudes may be over-aspiring relative to their abilities. But more likely is the

Figure 2-20. Educational Attainment by Ambitious Job Attitudes



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of ambitious job attitudes is .27.
The data underlying this figure can be found in Appendix E, Table E-2-20.

hypothesis suggested by Bachman et al. (1971, p. 87): it may be "that the more sophisticated college-bound respondents tended to avoid the extreme positions on our response scales and/or tended to provide a more complex mixture of answers."

Occupational aspirations. Each respondent was asked what sort of work he might do for a living. The responses were coded into the Duncan socioeconomic status scale (Duncan, 1961). This scale shows the expected strong relationship with educational attainment ($r = .47$), as displayed in Figure 2-21. From the top category, 99% obtained some post-high school education; only 36% of the bottom category did so. More than one in three (35%) of the top category completed college, compared to one in twenty-five (4%) of the bottom category. There is obviously a good deal of realism in the aspired occupations of tenth-grade boys.

Multivariate Analysis. For the regression analysis, instead of the single measure of ambitious job attitudes we use its two subindexes. The first consists of the positively weighted items ("job that pays off"); the second consists of the negatively weighted item ("job that doesn't bug me"). These two plus the status of aspired occupation are moderately strong predictors of educational attainment (25% of variance accounted for). All three contributed in the step-wise procedure, for a total explained variance of 39% (Table 2-9).

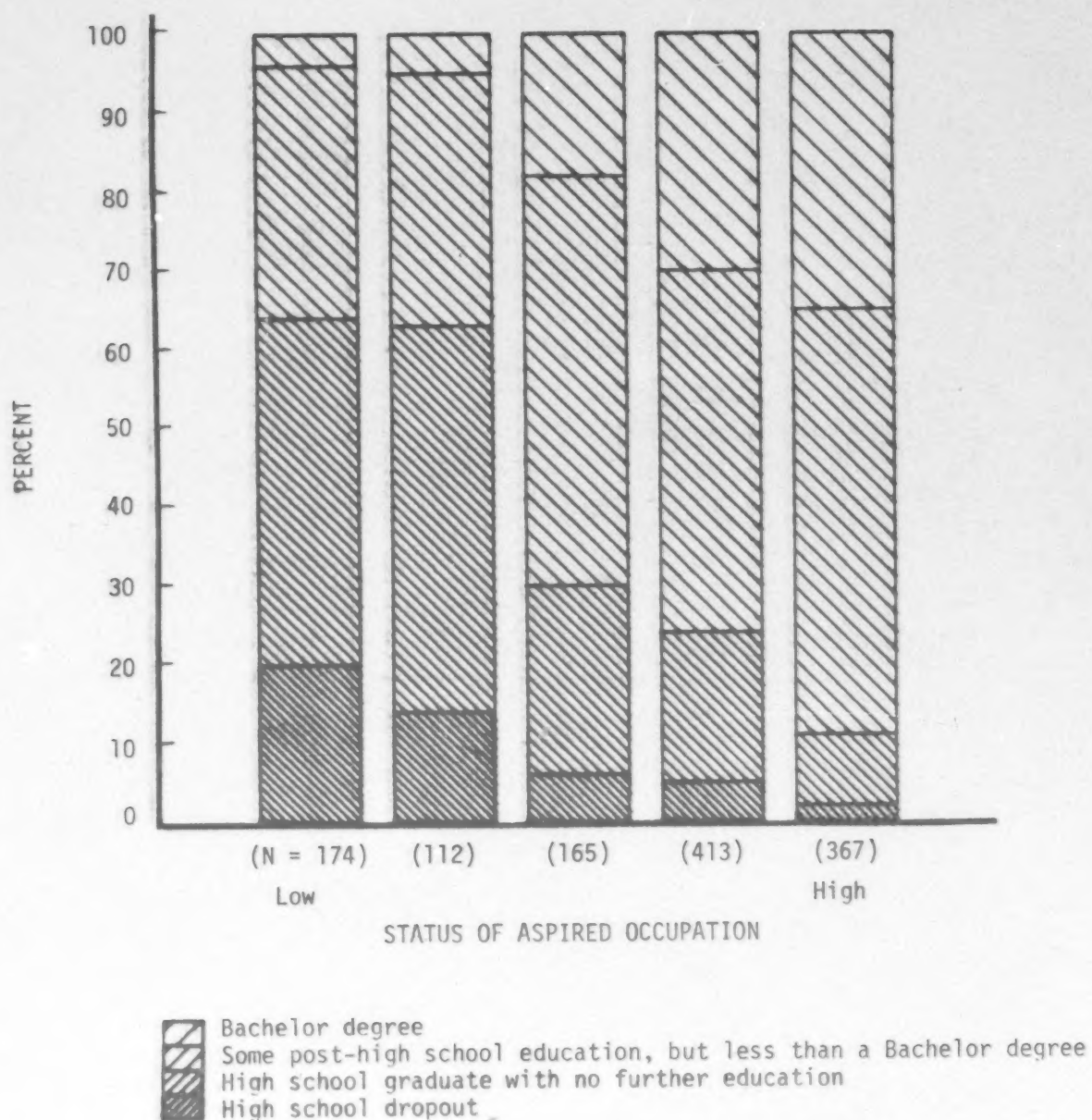
Table 2-9

Step-wise Multiple Linear Regression Predicting Educational Attainment from Background, Ability, and Occupational Attitudes and Aspirations

<u>Predictor</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.211	9.15
Number of Siblings	0	-.30	-.076	3.57
Ability Composite	0	.53	.274	11.08
Status of Aspired Occupation	1	.47	.233	10.41
Job that Doesn't Bug Me	2	-.20	-.060	2.89
Job that Pays Off	3	.13	.052	2.55

Variance Explained = 39.4% (Adjusted = 39.2%)

Figure 2-21. Educational Attainment by Status of Aspired Occupation



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of status of aspired occupation is .47.
The data underlying this figure can be found in Appendix E, Table E-2-21.

Status of aspired occupation is clearly an important factor in education. Even when socioeconomic background and intellectual ability are controlled, it has a major impact ($\beta = .223$).

Delinquent Behavior

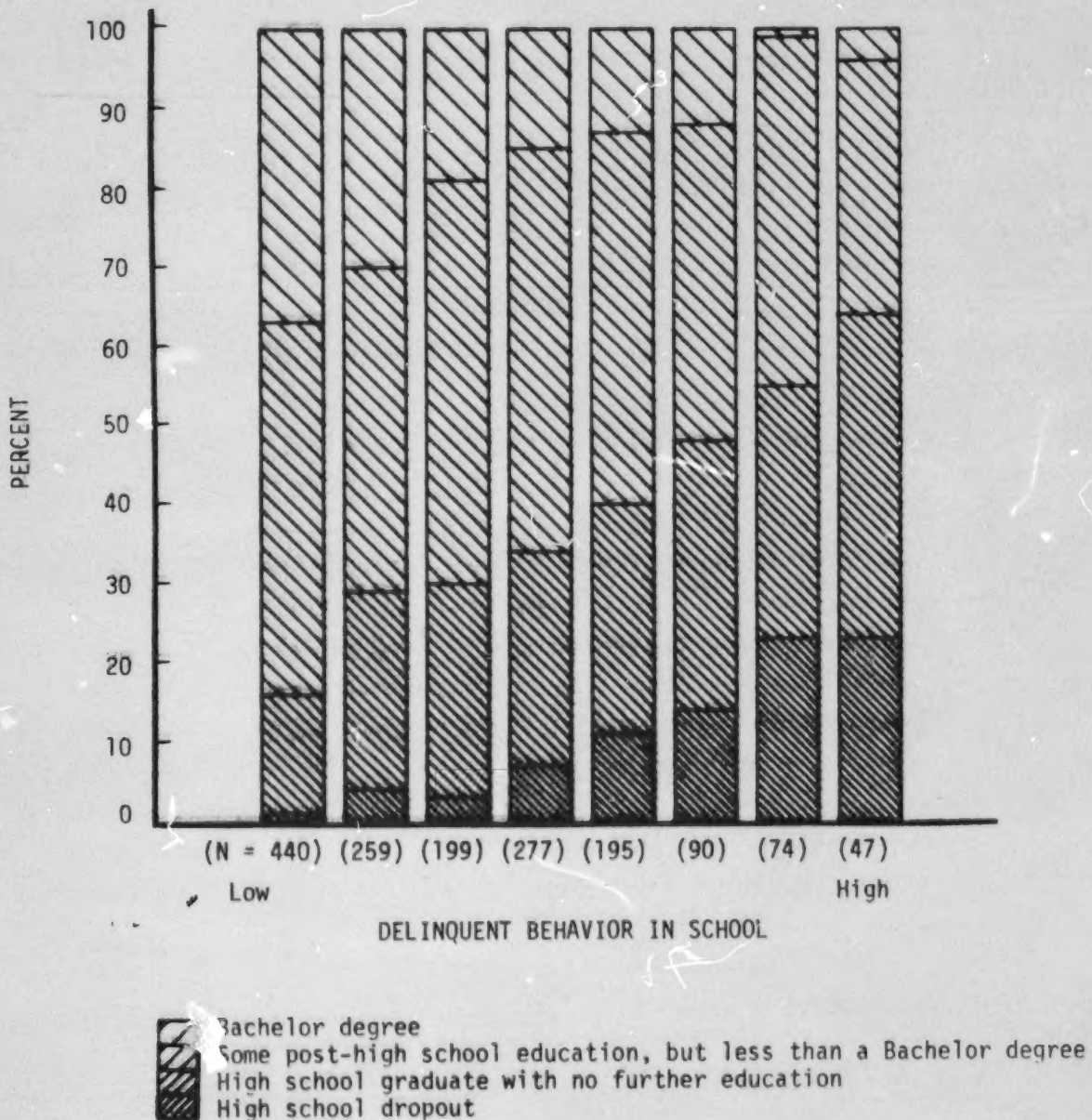
The final set of variables which we will look at were derived from items included in a "Confidential Information Questionnaire." The items referred to various deviant behaviors, most of them illegal. We will present three separate indexes constructed from the 26 items. There is some small overlap of items between the first and each of the other two indexes.

Delinquent Behavior in School. This index is comprised of items dealing with disruptive or delinquent behaviors in school, ranging from skipping a day and smoking against the rules to hitting a teacher or damaging school property. It is rather strongly, and negatively, related to eventual attainment. ($r = -.32$). (The product-moment tends to understate the degree of association because of the highly skewed distribution. The unstandardized regression coefficient is equal to -1.14 , which means that for every unit increase on the delinquency scale, there is a decrease of 1.14 units on the eight-category version of educational attainment.) It can be seen in Figure 2-22 that the proportion of those in the most delinquent group who stopped their education at a high school diploma is four times that of the least delinquent group (64% versus 16%).

Interpersonal Aggression. This index is comprised of nine items which involve some physical aggression--or threat thereof--against other persons. The measure correlates a bit less strongly than the school-based measure ($r = -.25$), but otherwise the relationship is quite similar.

Theft and Vandalism. Instead of aggressive behavior against persons, the theft and vandalism index is comprised of what might be

Figure 2-22. Educational Attainment by Delinquent Behavior in School



Note: The product-moment correlation between the eight-category measure of educational attainment and the continuous (non-bracketed) measure of delinquent behavior in school is $-.32$.
 The data underlying this figure can be found in Appendix E, Table E-2-22.

called crimes against property. These range from petty theft to arson. Again the relationship is negative ($r = -.12$), but is considerably less strong than the interpersonal aggression index.

Multivariate Analysis. Delinquent behavior in tenth-grade does not explain much of the variance in eventual educational attainment. Using all three indexes, the total is 12%. Only one is of importance in the step-wise procedure, as Table 2-10 shows.

Table 2-10

Step-wise Multiple Linear Regression Predicting Educational Attainment from Background, Ability, and Delinquent Behaviors

<u>Predictors</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.236	10.35
Number of Siblings	0	-.30	-.086	4.06
Ability Composite	0	.53	.351	15.30
Delinquent Behavior in School	1	-.32	-.219	11.00

Variance Explained = 39.2% (Adjusted = 39.0%)

Note that much of the importance of delinquent behavior in school is quite independent of background and ability. Within levels of background and ability, the more delinquent are likely to attain less education.

Multivariate Analysis Across Predictor Sets

We have touched on a great many predictors of attainment in this chapter. We have found that a goodly number (24, to be precise) of these predictors maintain some degree of effect after controls for background and ability were applied. But we have not yet looked across groups at the total set. We put all twenty-four into a step-wise procedure, again forcing SEL, number of siblings, and ability into the equation first.

Table 2-11

Step-wise Multiple Regression Analysis Predicting Educational Attainment
from Final Set of Variables

<u>Predictor</u>	<u>Step Entered</u>	<u>r</u>	<u>Beta</u>	<u>T-Ratio</u>
Socioeconomic Level	0	.47	.178	8.43
Number of Siblings	0	-.30	-.066	3.47
Ability Composite	0	.53	.147	6.32
Average Grades: 9th year	1	.53	.231	10.76
College Plans	2	.45	.141	6.91
Negative School Attitudes	3	-.39	-.106	5.27
Delinquent Behavior in School	4	-.32	-.092	4.70
Curriculum	5	.45	.105	4.99
Grade Failure	6	.35	.073	3.78

Variance Explained = 50.8% (Adjusted = 50.6%)

Table 2-11 shows the results through six steps. The first six variables to enter are all education related. Together with background and ability they explain more than half the variance in eventual educational attainment (50.6%). At this point in the step-wise procedure, no other variable could add more than .2%; the beta for the next variable to enter (need for self-development) is .048, with a t-ratio less than 3.00. We conclude from the fact that more than half the variance can be accounted for that the determinants of educational attainment are well-known by tenth-grade. And those determinants are the indicators of successful experiences in, and a positive attitude toward, schooling. Background and ability continue to have moderate direct effects, but their impact is primarily through the schooling variables. This is not a particularly profound finding, but it certainly underscores the importance of educational behaviors and experiences during the pre-high school years.

Footnotes

¹ See Bachman (1970, Appendix B) for a detailed description of the development of the summary measure of socioeconomic level.

² In the sections on multivariate analysis, we will use multiple linear regression both to assess the total impact of a number of variables on educational attainment, and also to assess the effect of each variable controlling for a number of other variables.

³ The total relationship, linear and nonlinear, is .23 (eta); the linear relationship is .20 (r). The difference is not totally trivial, nor is it uninteresting; but in the interest of parsimony, it will be ignored.

⁴ The introduction of controls is via a Multiple Classification Analysis. The family religious preference eta of .283 is reduced to a beta of .091 controlling SEL, number of siblings, ability, grades, college plans, curriculum, negative school attitudes and rebellious behavior in school.

⁵ This illustrates a point: it doesn't matter that the scale is not very accurate absolutely, so long as it rank orders the groups accurately.

CHAPTER 3

OCCUPATIONAL ATTAINMENTS

In this chapter we focus on the occupational attainments of the young men from the high school class of 1969, at a point five years beyond graduation, in the spring of 1974. There are three major criteria. One is the type, or status, of job. The type is based on a Census Bureau classification system. Generally, however, we will rely on a closely related concept, the status ranking assigned to an occupation. The particular scale used is the Duncan (1961) socioeconomic status scale. The second occupational outcome is simply employment--is the respondent employed? The third outcome measure is hourly wage rate.

We are interested in occupational attainments for several reasons. One purpose is to provide purely descriptive data. A more important reason is to examine the relationship of educational attainment to occupational attainment. Of particular interest is the comparison between high school dropouts and high school graduates who have no post-high school education. We will also look at a number of other variables which could influence an individual's occupational outcomes. Some of these variables are contemporaneous with the occupational behaviors. They describe what might be called environmental conditions. These include: the urbanicity of the respondent's area; the geographical region of the country; prevailing employment rates in the county in which the respondent lives; the prevailing wage rates for unskilled workers; and the prevailing market for unskilled male workers. Two other variables to be examined are not so much environmental conditions as experiences; these are military service and marital/parental status.

There are, of course, a variety of other factors in addition to those mentioned which could influence the type of job an individual obtains. Family background and ability in particular might very well influence occupational behavior. From the previous chapter, we know that they influence the amount of education attained. Any observed association between educational and occupational outcomes could actually be due to these earlier, and causally prior, variables. It therefore may be useful to control for at least three variables-- socioeconomic level, number of siblings, and intellectual ability--in looking at the effect of education on occupational outcomes. The same three, plus educational attainment, will also be controlled in examining the effects of environment and experiences. Educational attainment is not so obviously causally prior to the experiences; still it is in many ways a very fundamental variable, and we would not want to ascribe to, say, military service, any effects which are equally or more properly ascribed to education.

For the analyses in this chapter, a number of respondents will be excluded. We are interested in looking at early occupational attainments, but five years after high school graduation is too early for many. Some respondents have not yet completed their education; others have only very recently completed theirs. Many respondents are still taking academic courses; their occupations may be very temporary. Some respondents are in the armed forces; while for some purposes the military should be viewed as an occupation, these respondents will not be included in the current analyses. The reduced set of respondents for analyses in this chapter numbers a maximum of 1,052. Missing data, particularly in multivariate analyses, will usually result in a smaller number for any given analysis.

Occupational Attainments

Table 3-1 shows the type of job that these respondents hold as of spring, 1974. For the unemployed respondents, the type refers to their most recent job. It should be emphasized that this distribution reflects only those respondents who are in the labor force. It would

not be accurate to generalize that, for example, 28.3% of 23-year old men are operatives or service workers. Many 23-year old men are still engaged in educational pursuits, the great majority of whom will eventually be professional or technical workers; these have been left out of the table. As the table demonstrates, there is a wide range of occupations represented in our sample. Only 2.2% are farm managers or farm workers, but each of the other categories has a substantial number of cases.

TABLE 3-1
Census Category and Duncan Status

<u>Census Category</u>	<u>N</u>	<u>%</u>	<u>Duncan Status</u>
(1) Professional & Technical	155	14.7	67.2
(2) Manager & Proprietor	100	9.5	61.4
(3) Clerical & Sales	115	10.9	45.5
(4) Craftsmen	207	19.7	31.4
(5) Operatives and Service Workers	298	28.3	20.0
(6) Non-Farm Laborers	86	8.2	8.6
(7) Farmers	23	2.2	13.0
(8) Inap., NA	68	6.5	--
TOTAL	1052	100.0	Mean = 35.8
			Standard Deviation = 22.3

Also shown in Table 3-1 is the average status on the Duncan scale for each occupation group. There are great differences among the groups, with a range from 8.6 to 67.2. The eta value of .88 is very high, indicating that the two methods of job classification are essentially interchangeable for most purposes. Because the Duncan measure is more amenable to a variety of analytic procedures, and particularly because it is more suitable for correlational analyses, we will generally use it rather than the Census Bureau version. Before leaving the Census Bureau version, however, let us look at two other job related attainments in connection with it.

As Table 3-2 shows, job type--and therefore status--does not relate to the employment rates, nor to the wage rates, of our sample of men in their early twenties. It is perhaps surprising that the strong differences in job types (and statuses) are not reflected in hourly wage differences. There is an eta of .10 but the relationship is far from ordinal. Highest wages are earned by the managers and proprietors (\$4.23), next are craftsmen and professional and technical workers (\$4.20), and lowest in wages are laborers (\$3.89). It should be noted that the lack of hourly wage differences does not necessarily imply no income differences. Lower status jobs could be subject to more seasonal variation in available overtime, and in benefits. However, there is nothing in the present dataset to show any income advantage to higher status jobs for 23-year old men. Included in the questionnaire was a question which asked: "How much did you earn from working in the entire year of 1973?" There is no significant relationship between job type and response to this question. Furthermore, Kohen (1973) and Sewell and Hauser (1975) have shown that variance in income is not explained by early occupational status. Presumably, income differentials will be more evident at later stages in the occupational career cycle. (But as Kohn (1969), Jencks (1972), and Spaeth (1976) have all pointed out, even in age-extended samples the great majority of variance in income lies within, rather than between, job types.)

TABLE 3-2

Census Category and Unemployment and Wage Rates

<u>Census Category</u> ^a	Percent Unemployed	(N)	Hourly Wage Rate	(N)
(1) Professional & Technical	3.9	155	\$4.20	151
(2) Manager & Proprietor	5.0	100	4.23	94
(3) Clerical & Sales	4.3	115	3.96	110
(4) Craftsmen	8.7	207	4.20	201
(5) Operatives & Service Workers	11.1	298	3.96	290
(6) Non-Farm Laborers	11.6	86	3.89	86

^aCurrent or most recent job. Farmers, Inap and NA's are excluded.

Occupational Attainments Linked to Family Background and Ability

In determining the effects of educational attainment, environments, and experiences on occupational outcomes, we wish to control family background and intellectual ability. The technique for controlling will be Multiple Classification Analysis (MCA, Andrews et al., 1973). For this chapter, MCA will serve our purposes better than the linear regression used in the preceding chapter. One reason is that several of the predictors are not linear in their effects. A second is that the county level variables have a high proportion of missing data, a condition which is not problematic with MCA. And a third is that MCA provides output which can be conveniently used.

A key feature of the MCA technique is its ability to show the effects of any predictor, both before and after taking into account the effects of all other predictors. The program provides an "adjusted mean" for each category of each predictor. This adjusted mean indicates

what the mean would have been if the members of the category had been exactly like the total population in the analysis with respect to its distribution over all the other predictor classifications. In other words, the adjusted means are the results of controlling for other predictors.

Two important measures of association are available for each predictor. Eta is a measure of the ability of the predictor to explain variation in the dependent variable. Beta is analogous to eta, but is based on the adjusted means, rather than on the unadjusted (raw) means. Beta provides a measure of the ability of the predictor to explain variation in the dependent variable after adjusting for the effect of all the other predictors.

The multivariate relationships among socioeconomic level (SEL), number of siblings, intellectual ability, and the three occupational attainments are shown in Table 3-3. Only in the case of Duncan status are the predictors able to explain a substantively significant amount of variation in attainment (14.5%). Ability is clearly the major determinant, as indicated by the beta of .310. Employment and hourly wages are much less explainable, 2.3% and 1.4%, respectively. As indicated earlier, other investigators have also found these dimensions difficult to explain. (See especially Kohli, 1973.) An implication of Table 3-3 is that controlling family background and ability will not result in very much actual "adjusting" of effects on employment and wage rates.

Occupational Attainments Linked to Educational Attainment

Table 3-4 shows the relationship between educational attainment and job type. Note that the great majority of high school dropouts (over 73%) are in the categories of craftsmen, operatives and service workers, and non-farm laborers. Only 17% of those with a bachelor degree are in those categories. Instead the majority of the college graduates are in professional or technical jobs. Clearly, a college degree is associated with much higher status jobs. But can the same

be said for a high school diploma? That is, are high school graduates in higher status jobs than dropouts? Fifty-two percent of the dropouts are in the relatively low status occupations of operatives and service workers, and non-farm laborers. For the high school graduates with no post-high school education, only slightly fewer are in these categories (47%).

TABLE 3-3

MCA: Occupational Attainments and Background and Ability

<u>Predictor</u>	<u>Duncan Status</u>		<u>Unemployment Rate</u>		<u>Hourly Wage Rate</u>	
	<u>eta</u>	<u>beta</u>	<u>eta</u>	<u>beta</u>	<u>eta</u>	<u>beta</u>
Socioeconomic level	.251	.130	.140	.149	.121	.133
Number of siblings	.215	.123	.107	.096	.108	.118
Ability composite	.361	.310	.108	.114	.069	.071
Multiple correlation coefficient	= .162		.041		.033	
(Adjusted)	= .145		.023		.014	

Another way to look at the relationship between education and status is to use the Duncan scale. The solid line in Figure 3-1 indicates the mean scores for the four education groups. The eta of .510 substantiates the strong association between education and job status. But there are not large differences between high school dropouts and graduates.

The average Duncan score status for the dropouts is 23.3, compared to 27.4 for the graduates. Since the standard deviation in each group is about 17, the difference in means would be statistically significant only under the most lenient of assumptions (one-tailed test, simple random sampling, significance level of .05, $t = 1.86$). This small difference is further reduced when the controls for background

TABLE 3-4
Census Categories and Educational Attainment

Census Category	Total		Educational Attainment									
	N	%	Dropout		Graduate		Some College		Bachelor			
	N	%	N	%	N	%	N	%	N	%	N	%
(1) Professional & Technical	155	14.7	0	0	14	4.0	46	11.3	95	51.1		
(2) Manager & Proprietor	100	9.5	11	10.5	20	5.6	45	11.1	24	12.9		
(3) Clerical & Sales	115	10.9	3	2.9	35	9.9	52	12.8	25	13.4		
(4) Craftsmen	207	19.7	22	21.0	87	24.6	93	22.9	5	2.7		
(5) Operatives & Service Workers	298	28.3	39	37.1	129	36.4	111	27.3	19	10.2		
(6) Non-Farm Laborers	86	8.2	16	15.2	37	10.5	26	6.4	7	3.8		
(7) Farmers	23	2.2	1	1.0	9	2.5	9	2.2	4	2.2		
(8) Inap., NA	68	6.5	13	12.4	23	6.5	25	6.1	7	3.8		
	1052	100.0	105	100.1	354	100.0	407	100.1	186	100.1		

and ability are introduced, as indicated by the dashed line in Figure 3-1. The difference between dropouts (26.5) and graduates (29.3) is **only** 2.8 points on the scale, well under 20% of a standard deviation.

The very substantial beta of .434 in Figure 3-1 indicates that while a small part of the association between education and status is shared with background and ability, it is education which accounts for nearly all of the differences in status between college graduates, college dropouts, and those who never enter college.

Table 3-5 displays unemployment and wage rates for different levels of educational attainment. The data on rates, show clearly that high school dropouts run a greater risk of unemployment. The dropouts are nearly twice as likely to be unemployed as graduates (15.7% vs. 8.3%). It should not be immediately inferred that dropping out is what causes the increased unemployment. There are other possibilities, the most obvious of which is that those factors which contribute to or cause dropping out also cause greater unemployment. But, as the adjusted means show, there is no attenuation of the dropouts' disadvantage when we control background and ability.

TABLE 3-5

Unemployment and Wage Rates by Educational Attainment

<u>Educational Attainment</u>	<u>Percent Unemployed</u>		<u>Hourly Wage Rate</u>	
	unadj	adj ^a	unadj	adj ^a
Dropout	15.7	15.4	4.12	4.24
Graduates	8.3	7.9	3.93	3.92
Some College	7.0	6.7	4.05	4.03
Bachelors	7.2	8.5	3.99	3.99

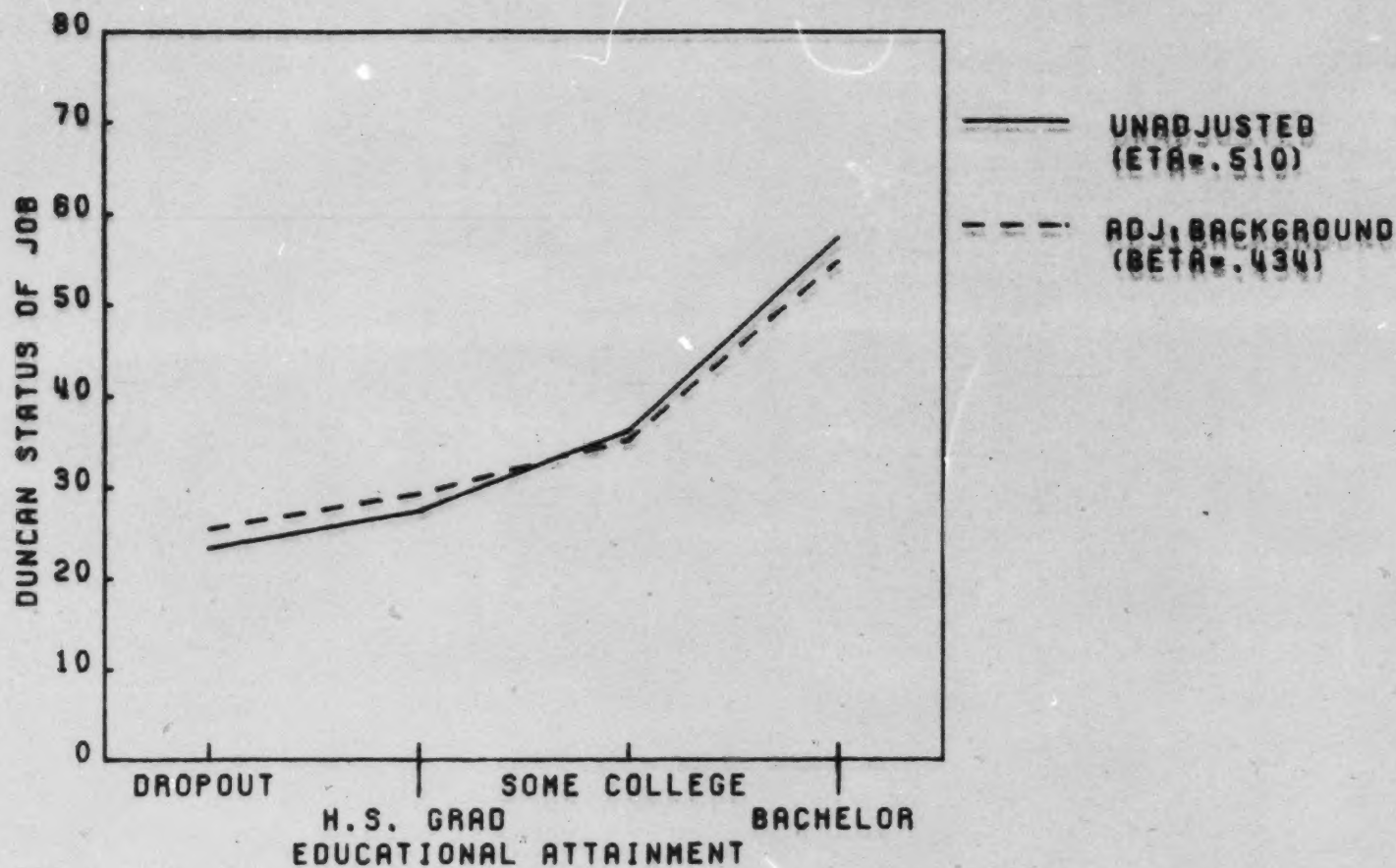
eta = .091

eta = .042

beta = .089

beta = .056

^a Adjusted for socioeconomic level, number of siblings, and ability.



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Figure 3-1. Duncan Status of Job by Educational Attainment

Since there exists some association between education and employment, we might expect that there would also be some differences in hourly wages. But as the table shows, such is not the case. In fact, high school dropouts have the highest hourly wage rates. This is somewhat surprising; in spite of dropouts' relative disadvantage in status and rate of employment, those who do hold jobs do not seem to be suffering from lower wages. The difference between the dropouts and graduates with no additional education is not statistically significant, but the lack of such a difference is substantively significant. As noted earlier, the lack of hourly wage differences does not necessarily imply no differences in income. A higher incidence of unemployment could result in less yearly income for dropouts than graduates. And in fact, that is exactly what we find. In response to the question which asked for yearly income, dropouts reported incomes which averaged around \$6,720, while graduates averaged \$7,100. This difference also falls short of statistical significance. (Nor are the other respondents with no college degree significantly different from dropouts or graduates in 1973 income; most of the respondents with college degrees were not in the labor force for the entire year, so their data were not examined.)

To summarize, the following conclusions can be drawn:

- (1) There are substantial differences in the types and statuses of jobs attained by young men.
- (2) These differences are not carried over into hourly wages; there is little difference in wages between job types.
- (3) Employment rates are also essentially unrelated to job type or status.
- (4) Educational attainment is closely tied to type and status, with more education resulting in higher status jobs.
- (5) In comparing dropouts with graduates, we saw little difference in status or wages, particularly when background and ability are controlled. But there is a decided advantage for dropouts in that they are twice as likely to be unemployed as the graduates.

Occupational Attainments Linked to Environments and Experiences

We will now look at the relationship between occupational attainments and a number of other variables which could have some effect on occupational behaviors.

Military Service. We group our sample into three categories depending on their military service: (1) those who did not serve in the armed forces, $N = 745$; (2) those who served on active duty, but not in Vietnam, $N = 132$; and (3) those who served in Vietnam, $N = 83$. A number of respondents served in the National Guard or in Reserves; these have been excluded from analyses because of their ambiguous status vis-a-vis military service. The reader should remember that in this chapter dealing with occupational attainments, we are excluding current members of the armed forces. Thus, it is more accurate to say we are dealing with military service history or veteran status.

Figure 3-2 shows the average job status rankings for the three groups. The average Duncan scores for both of the veteran categories are lower than for the civilians. Table 3-6 shows that the veterans also are more often unemployed than the non-veterans. Only 7.1% of the non-service group is unemployed compared to 13.1% and 12.3 for the service groups. These differences are not entirely trivial; nor is the interpretation of the findings trivial. Why should military service make finding employment in a good job more difficult? One possibility is that the seeming deleterious effect of military service is due to more fundamental factors.

When we control for socioeconomic level, number of siblings, and ability, the association between military service and status is reduced from an eta of .204 to a beta of .144. Controlling education reduces the effect still further, down to a beta of .071. As Figure 3-2 shows, the adjusted means actually differ very little between those with no military service and those in regular service who did not serve in Vietnam. The data lead to the clear conclusion that it is not so much that military service results in lower status jobs. Rather, it is that military service is associated with less

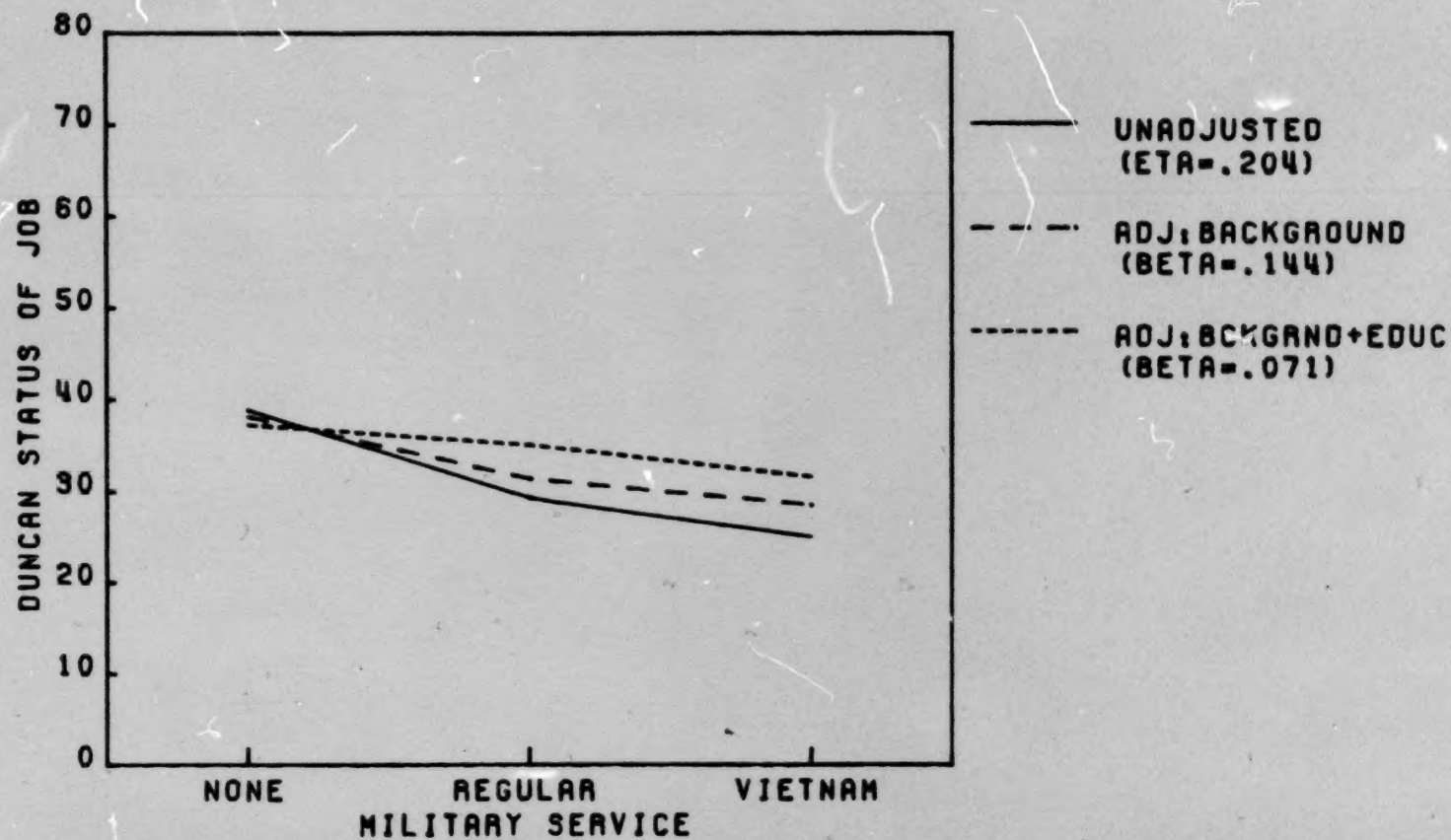


Figure 3-2. Duncan Status of Job by Military Service

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advantaged background, ability, and education. The data in Table 3-6 show that the same conclusion can not be drawn for the employment situation. Differences in background, ability, and education do not alter the fact that veterans show about 5% higher rates of unemployment.

Status and employment differences are not carried over into hourly wages; those who had been on active duty, both in and not in Vietnam, average \$4.03 per hour, compared to \$4.00 per hour for non-veterans ($\eta^2 = .054$).

TABLE 3-6
Unemployment by Military Service

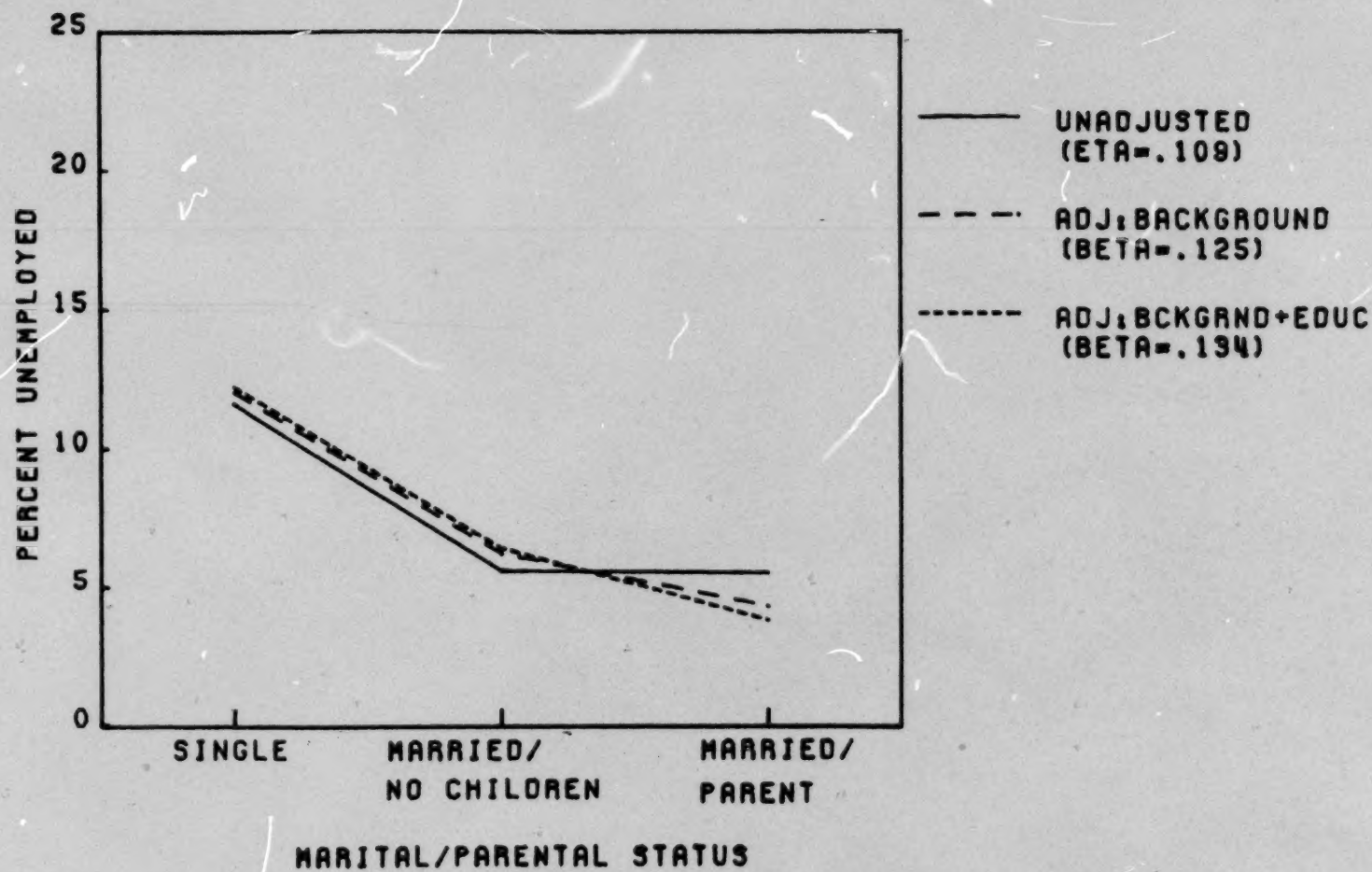
<u>Military Service</u>	<u>Percent Unemployment</u>		
	unadj	adj ^a	adj ^b
None	7.1	7.2	7.2
Regular	13.1	12.4	12.8
Vietnam	12.3	12.1	12.1

$\eta^2 = .086$
 $\beta = .075 \quad .081$

^a Adjusted for socioeconomic level, number of siblings, and ability

^b Adjusted for socioeconomic level, number of siblings, ability and educational attainment

Marital/Parental Status. For this analysis it will be useful to group our sample into three categories: (1) single, $N = 447$; (2) married parents, $N = 284$; and (3) married nonparents, $N = 262$. As in the case of military service, marital/parental status is a difficult variable to interpret in causal terms. Figure 3-3 shows that single persons are about twice as likely to be unemployed as married persons (11.6% versus 5.5%). This difference could conceivably be caused by the state of being



3-15

Figure 3-3. Percent Unemployed by Marital/Parental Status

married; perhaps there is more felt pressure toward finding and keeping employment among young husbands than young singles. Alternatively, perhaps young men who can find and hold jobs are financially more able to marry early. And of course there are numerous other possibilities.

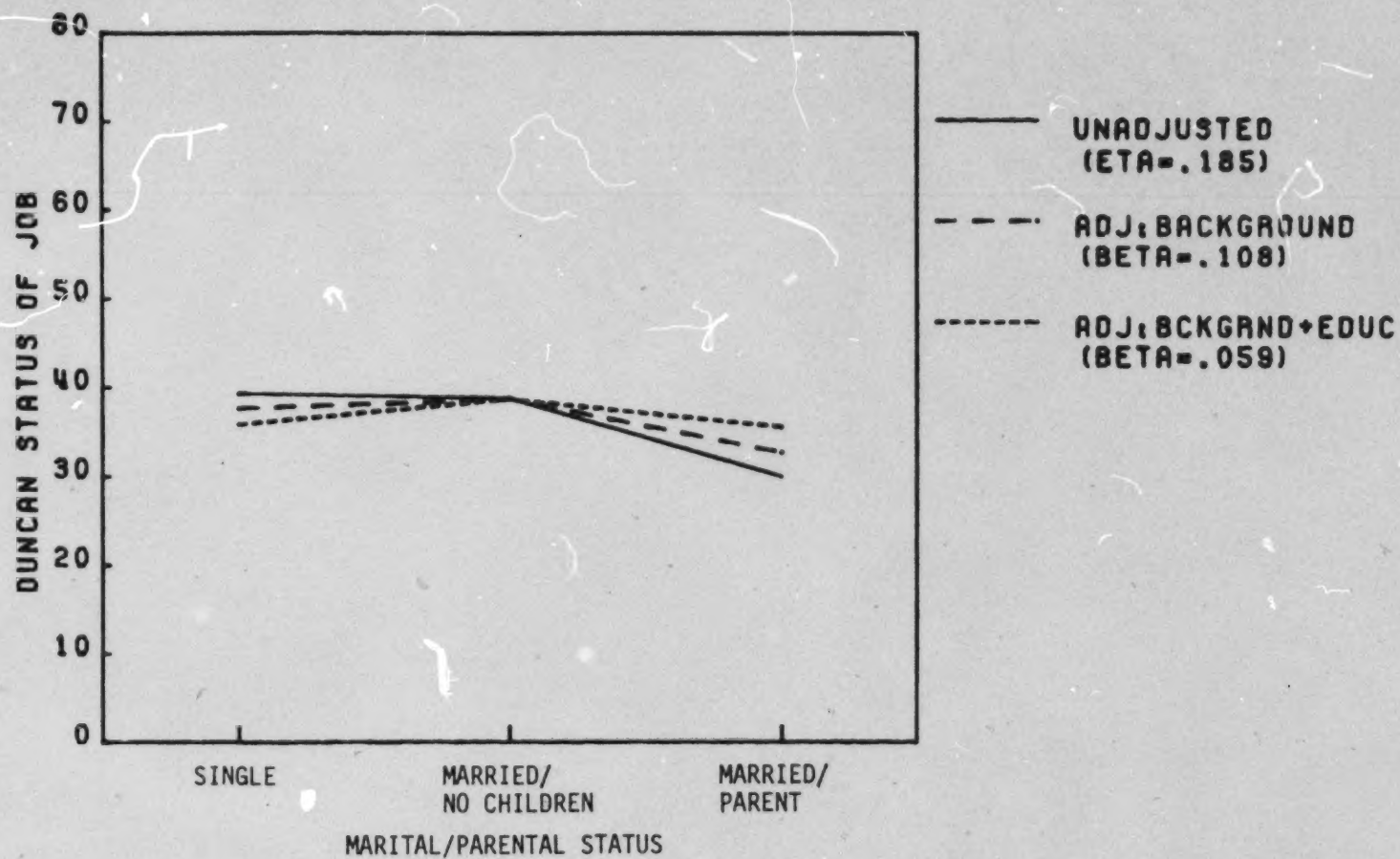
The singles may be worst off as far as employment is concerned, but the parents get the lowest status jobs, averaging about one-third of a standard deviation below the other two groups (Figure 3-4). On the other hand, in spite of lower status jobs, the parents average about \$0.16 per hour more than married nonparents, who in turn average about \$0.16 per hour more than singles. These wage differences are not statistically or substantively significant.

What happens to these relationships when we control socioeconomic level, number of siblings, and ability? The result with Duncan status is very similar to the results for military service: the eta of .185 is reduced to a beta of .108. And the addition of educational attainment culminates in a beta of only .059. As the adjusted lines in Figure 3-4 show, the married parents' lower status jobs are due virtually entirely to their differences in the control variables. The picture in the case of unemployment is not the same. There, as figure 3-3 indicates, the greater unemployment experienced by singles is actually seen to be even greater when the controls are applied (the beta of .134 is higher than the eta of .109). Along the pay dimension, there are no substantive differences before or after controlling.

The message here appears to be that marriage may decrease the likelihood of being unemployed, but the jobs that are obtained are not significantly different as a function of marital or parental status.

Urbanicity. Our measure of urbanicity uses four categories:

- (1) rural, or small city or town of less than 50,000; (2) medium-sized city of 50,000 to 100,000, or suburb thereof; (3) fairly large city of 100,000 to 500,000, or suburb thereof; and (4) very large city of 500,000 or more, or suburb thereof.¹



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Figure 3-4. Duncan Status of Job by Marital/Parental Status

The higher status jobs are in the larger, more urban areas, as Figure 3-5 shows. Jobs in the very large cities average about 41 on the Duncan scale, compared to about 33 in the least urban areas, a difference of about one-third of a standard deviation ($\eta = .170$). Following the pattern established with military service and marital status, the relationship between Duncan status and urbanicity can be attributed largely to differences in the control variables. The η is .170, but the β s are .107 and .060, controlling first background and ability, then also educational attainment.

Employment rates show a rather different relationship with urbanicity, though again, the differences are rather small. There is a six percent difference in rate of unemployment between the highest (13.6% for those in fairly large cities) and the lowest (6.0% for those in the rural areas of small cities) categories (see Table 3-7). Like status, pay per hour is highest in the most urban areas (\$4.26), compared to the rural areas and small cities (\$3.85). This difference is about 30% of a standard deviation. η values for employment and pay are .108 and .102, respectively. Employment and pay per hour are essentially unaffected by any controlling. Table 3-7 shows the means adjusted for background, ability, and education.

TABLE 3-7

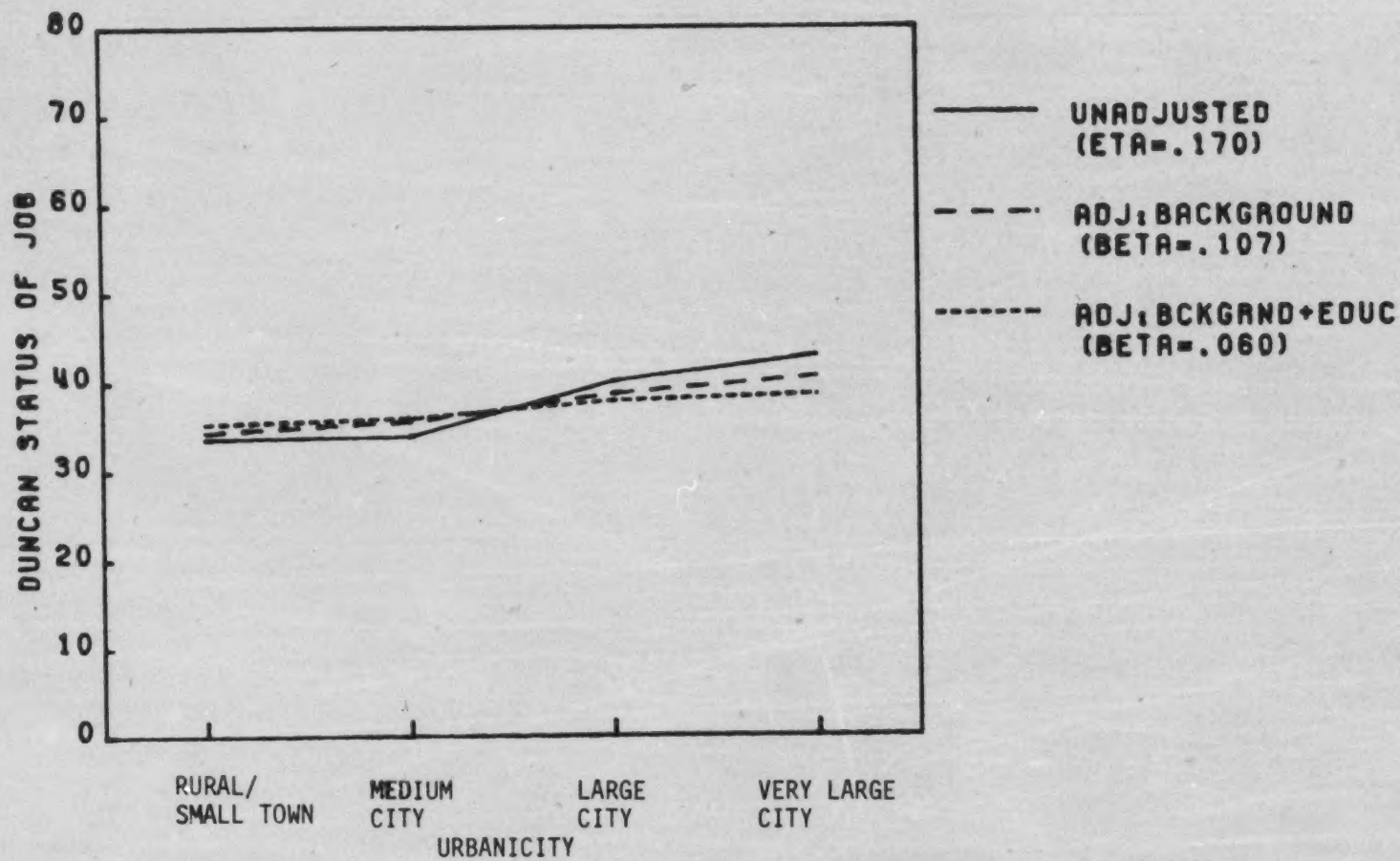
Unemployment and Hourly Wage Rates by Urbanicity

Urbanicity	Percent Unemployed		Hourly Wage Rate	
	unadj	adj ^a	unadj	adj ^a
(1) Less than 50,000	6.0	6.1	3.85	3.86
(2) 50,000 - 100,000	6.9	6.1	4.10	4.06
(3) 100,000 - 500,000	13.6	13.4	4.08	4.08
(4) 500,000 +	10.2	10.8	4.26	4.28

$\eta = .108$ $\eta = .102$

$\beta = .110$ $\beta = .100$

^aAdjusted for socioeconomic level, number of siblings, ability, and education.



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Figure 3-5. Duncan Status of Job by Urbanicity

Region. The status of jobs varies slightly by geographical region, with the West being low (mean Duncan status of 31), and the Northeast high (42). The North Central and the South are in the middle (about 35). There is rather little variation in unemployment rates among the West, North Central, and Northeast regions; all three average more than 8%. But the South shows a distinctly lower average of 4%. Pay per hour varies least by region, there being less than one-fifth of a standard deviation separating the extremes.

About two-thirds of the slight regional variations in status is explainable by differences in background, ability, and education. The South's lower unemployment rate is not affected by controls.

County Level Conditions. We obtained measures of a number of conditions related to the labor market in most of the counties in which our respondents resided.² These measures include estimates provided by each state's unemployment security commission of: (1) how good the labor market is for unskilled males; (2) the prevailing wage rates for unskilled males; and (3) the unemployment rate.

Table 3-8 shows the data relating the first of these measures to Duncan status, unemployment, and wages. The mean Duncan status scores are not really different among the groups except that status tends to be a little higher in areas where a number of unskilled workers are unable to find jobs. Given the lack of regularity in the data, it is likely that the little variation is due to other factors. And in fact, the eta value of .125 is reduced to .054 after controlling background, ability, and education.

Unemployment rates do vary somewhat by how good the market is estimated to be. In cases where there are more jobs than applicants, or where most people can find jobs, unemployment rates are under 8%;

where some or many unskilled workers are unable to find jobs, rates are over 8%. The difference, which is not affected by controls, is slight, though certainly in the expected direction.

TABLE 3-8
Occupational Attainments by County Labor Market

<u>Labor Market</u>	<u>Duncan Status</u>	<u>Percent Unemployed</u>	<u>Hourly Wage Rate</u>
More jobs than applicants	32.2	7.3	3.60
Most people can find jobs	33.8	4.4	3.57
A number of unskilled workers cannot find jobs	39.4	8.3	4.30
Many unskilled workers cannot find jobs	34.2	11.8	4.11
Not ascertained	38.3	7.3	3.88
	eta = .125	.081	.182
	beta = .054	.074	.174

Pay per hour seems to be somewhat more determined by the county labor market. Where there are more jobs than people, wages average well under \$4 an hour; where there are more people than jobs, wages are over \$4 an hour. In other words, wages are high when jobs are scarce; one implication of this finding is that it is the lower paying jobs which are eliminated in times of economic recession. Again, controls do not affect the relationships.

The second county level measure of prevailing conditions is an estimate of wage levels for unskilled males. This measure shows virtually no relationship with Duncan status, unemployment, or hourly wages, either before or after controls are applied. In each uncontrolled case, the adjusted value of eta is zero. This total

lack of association is not likely due to lack of variation in the county measure--47% of respondents are in areas where the prevailing hourly rate is less than \$2.49, for 39% the rate is between \$2.50 and \$2.99, and for 14% the rate is over \$3.00.

The third county level measure is the estimate of the unemployment rate. This measure does show the expected relationship with respondents' reports of their own unemployment. Where the county estimate is less than 4%, our respondents report an average of less than 5% unemployment; where the county estimate is over 6%, our respondents report an average of 10%. The Duncan status measure relates to county unemployment rather weakly and erratically. Hourly wages are not totally independent of county unemployment rates; where unemployment is low, wages also tend to be low (Table 3-9). This is consistent with the earlier finding that where the market for unskilled males is bad, the scarcity of jobs seems to be associated with higher pay for those jobs that do exist. None of the relationships is altered by controls.

TABLE 3-9

Occupational Attainments by County Level Unemployment

<u>County Unemployment Rate</u>	<u>Status</u>	<u>Percent Unemployed</u>	<u>Hourly Wages</u>
(1) Less than 4%	38.1	4.9	3.73
(2) 4 to 6%	34.7	9.2	4.18
(3) Over 6%	36.4	10.1	4.14
Not Ascertained	38.2	8.3	3.77
eta =	.062	.074	.131
beta =	.040	.068	.132

Summary of Relationships with Environments and Experiences. In general, the specific environments and experiences explored here have less impact upon occupational attainments than we found for background, ability, and education. Nevertheless, some relationships emerged which are worth summarizing here.

(1) Veterans show more unemployment than nonveterans, but status and wages do not differ by military service, after background and ability.

(2) Single respondents show more unemployment than married respondents, but status and wage show no effect of marriage, after controlling background and ability.

(3) The more urban areas have higher wages, and higher status jobs. Less unemployment is found in the more rural areas.

(4) There is little to report by way of regional variations in occupational attainments. A small exception is that there is least unemployment in the South.

(5) Estimates of county level conditions show rather little relationship with our occupational data. An exception is that where jobs are scarce, wages are a bit higher for those jobs that do exist.

The Limited Predictability of Wages and Unemployment Rates

We have just seen that for the young men in our study, wages and unemployment rates are not nearly so predictable from a number of variables including educational level, family background, and ability as is the status of their jobs. The major reason for the absence of a relationship between education and wages is probably that the respondents are quite young, 22 or 23 years old. Those with college experience are in many cases just beginning their occupational careers, while those with no college have been on the job for a number of years. Juster (1975) summarized a number of studies which provided "...the firmly documented finding that investments in formal schooling apparently yield a "profit" both to the individual...and to society as a whole, after standardizing for the influence of innate ability and family background on earnings" (p. 41). In other words, there appears to be an income advantage to additional education; the lack of support for that relationship in the present study is very likely due to the restricted age range.

The same factor probably accounts for the lack of an association between wages and ability. In an analysis of several data sets, Hause (1975) had to conclude: "For early years in the earnings profile, the ability coefficient is very small, and in most cases not statistically significant" (p. 148). In later years, Hause found that the effect of ability did become more significant. Still, even in later years, there is considerable variation in income which is not accounted for by education and ability. This is hardly a new observation; in Ecclesiastes, we read that "...the race is not to the swift, nor the battle to the strong, nor bread to the wise, nor riches to the intelligent, ...but time and chance happen to them all."

That unemployment rates are not more dependent on the education, ability, background, environments, and experiences may be surprising. First it should be noted that there are some observed relationships. As we saw, high school dropouts and unmarried men were particularly likely to be unemployed. Second, over 90% of the sample were employed; the very skewed distribution on the dependent variable limits the ability of other variables to predict to it. Finally, we again note that Kohen (1973) also found unemployment not very predictable in a similar sample: "The principal

inadequacy of the model is that it cannot explain the unemployment dimension of labor market experience" (p. 137).

Multivariate Prediction of Job Status

For the rest of this chapter, we will focus on just the single dimension of job status, as indexed by the Duncan scale. The questions we will deal with, in more detail than earlier, are: What are the characteristics of individuals which determine their later job status? And, in particular, what is the role of educational attainment? In examining these questions, we will not be concerned with the various experiences and environments dealt with in the previous section. This is no great loss, since their contribution to understanding attainment of job status is quite minimal.

In Chapter 2, we went through a rather laborious process in determining a set of variables, each of which seemed to make a significant contribution to educational attainment. The same basic process is utilized for job status, though the description of the intermediate steps will be eliminated. As with educational attainment, only variables measured in 1966 are used. Table 3-10 presents the final equation linking the various personal characteristics with job status. The product-moment correlation of each predictor with job status is also included.³ ((Educational attainment is to be added later when we seek to analyze its contribution.)

TABLE 3-10
Multiple Regression Analysis
Predicting Occupational Status From Personal Characteristics

<u>Predictor</u>	<u>r</u>	<u>beta</u>	<u>t-ratio</u>
Socioeconomic level	.253	.068	2.04
Number of siblings	-.196	-.053	1.72
Ability composite	.349	.146	4.05
Average Grades: 9th year	.343	.167	4.98
Curriculum	.306	.106	3.15
College plans	.275	.080	2.44
Need self-development	.200	.071	2.36
Theft and vandalism	-.086	-.049	1.69

Variance explained = 20.9% (adjusted =20.2%)

There is a very considerable degree of overlap with the set of variables which had significant effects on the level of attained education (see Table 2-11). One interesting exception is the measure of the need for self-development. This variable is intended to tap motives or needs to improve oneself; as such, it might be considered a measure of ambition. It is therefore not unreasonable that it should contribute, albeit in a very small way, to the quality of the job which an individual obtains.

The only other measure making an appearance in Table 3-10 which does not also appear in Table 2-11 is theft and vandalism. But the choice between this variable and delinquent behavior in school, which is in Table 2-11 and not in Table 3-10, is rather arbitrary. They are highly intercorrelated ($r = .66$), thus it makes little difference which one is included in a predictive equation.

Generally, it is evident that the variables which are important in determining later job status are background, ability, and education-related behaviors and aspiration. Several variables which are more directly relevant to occupation, such as ambitions, job attitudes and status of aspired occupation, are not significantly related to attained job status, in the presence of the variables in Table 3-10.

One point to notice is that status is considerably less dependent on the set of personal characteristics which we measured than is educational attainment. The explained variance in job status amounts to only 20.2%, compared to about 50% for education level.

Now, what happens when we try to assess the impact of educational attainment? One problem is that not all of the predictors of educational attainment are included. Thus, we could incorrectly ascribe to educational attainment an effect which more properly belongs to some factor antecedent to attainment. Therefore, we will also include those variables which appear in Table 2-11, but not in Table 3-10. (And we will use delinquent behavior in school rather than theft and vandalism.) The equations, with and without educational attainment, are shown in Table 3-11.

TABLE 3-11

Multiple Regression Analysis
Predicting Occupational Status From Personal Characteristics & Education

<u>Predictor</u>	<u>r</u>	<u>beta</u>	<u>beta</u>
Socioeconomic level	.253	.069*	.009
Number of siblings	-.196	-.055	-.042
Ability composite	.349	.138*	.090*
Grade failure	.162	-.013	-.036
Average grades: 9th year	.343	.168*	.082*
Curriculum	.306	.104*	.069*
College plans	.275	.077*	.033
Negative school attitudes	-.213	-.035	-.006
Delinquent behavior in school	-.148	-.011	.019
Need self-development	.200	.070*	.055
Educational attainment	.479	----	.330*

Variance Explained = 20.8% = 26.2%
(Adjusted) (20.0%) (25.4%)

*t-ratio greater than 2.0

Note first that the slightly different set of variable explains essentially the same amount of variance as the set in Table 3-10, 20.0% compared to 20.2%. The addition of educational attainment increases the amount to 25.4%. This is roughly half the proportion of variance which can be explained in education.

Now how can we assess the effect of education vis-a-vis the other factors in Table 3-11? We know that educational attainment is closely linked to job status. This link could be indicative of two very different causal mechanisms. The two may be thought of as anchoring two ends of a continuum. On the one end, educational attainment is conceived to be the determinant of job status. Other factors such as ability and family background would be correlated with

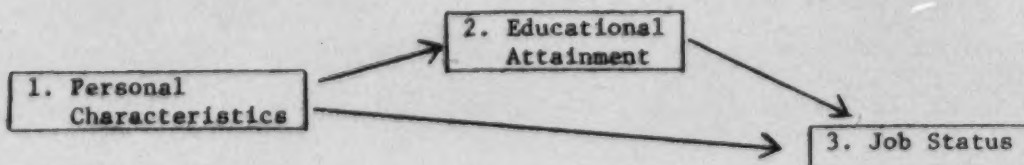
status, but they would have no direct effect; all their effect would be indirect, filtered through education. At this end of the continuum, educational attainment is the sine qua non of occupational attainment. Or, as Withey put it, "Education has increasingly become the bridge to better status" (1971, p. 131).

On the other end of the continuum, educational attainment is seen as an indicator variable, a proxy for more fundamental factors. These more fundamental factors might include family background, ability, motivations, values, attitudes, and early behaviors. Educational attainment, in this view, would not have any independent effect on status attainment; it would merely be reflecting the effect of these other variables, which we have been calling personal characteristics.

A thoroughgoing analysis of all the possible causal interconnections would be beyond the scope of this report. Our concern here is with the special contribution of education. How do we separate out and evaluate the contribution which education makes to job status, given that education is closely correlated with many of the personal characteristics which also correlate with job status?

Let us indulge in an enormous simplification. Let us treat the whole set of personal characteristics as one large composite variable. Now, since all of the personal characteristics are measured earlier than educational and occupational attainment, it seems reasonable to treat them as causally prior. It is also reasonable to treat educational attainment as causally prior to job status. (There is surely a strong sociological tradition for doing so, although one can imagine instances where the reverse causal direction also applies.) Given these causal assumptions, we can cast our questions in the form of a simple path model, as shown in Figure 3-6:

Figure 3-6:



As an example, let us imagine a condition where the composite measure of background and education have a correlation of .70, and education and status correlate .50. Under this condition, if background and status correlate .714, then the direct effect of education would be equal to zero. This would be an illustration of the education-as-proxy end of the continuum; all of the education-status correlation would be spurious, due solely to the association of education with background factors.

Under the same conditions of background-education correlating .70 and education-status correlating .50, but with background and status correlating only .35, then the direct effect of background would be equal to zero. This illustrates the education-as-bridge end of the continuum; all the background-status correlation would be due to an indirect causal association, acting through education.

The reality, one suspects, would lie somewhere in between these two extremes.

The problem is how do we calculate the correlations between variables 1, 2, and 3 in our path diagram. One way is to use multiple correlations. The correlation between variables 1 and 2 would be the multiple correlation between all the personal characteristics and educational attainment. The correlation between variables 1 and 3 would be the multiple correlation between all the personal characteristics and occupational attainment. The correlation between variables 1 and 3 would be the multiple correlation between the personal characteristics and occupational attainment. And the correlation between variables 2 and 3 would be just the zero order correlation between education and occupation. Unfortunately, there is an inconsistency here; the weights applied to the personal characteristics would not be the same for the two multiple correlations. In effect, we would be using two different composites, instead of the one which the model implies. As a matter of fact, however, it turns out that the particular set of weights makes rather little difference in the conclusions which are drawn. (See Wainer, 1976, for proof that under very general circumstances coefficients in multiple regression models can be replaced with equal weights with almost no loss in accuracy.)

A better procedure is to follow Coleman's (1976) solution to the

problem. We first predict to status from all the personal characteristics plus educational attainment. Then we create a composite of the person variables, using the weights determined by the predictive equation. When we do this, we obtain the values indicated in row (1) of Table 3-12. The values in row (2) are generated by using the first method, which uses multiple correlations and two implicit composites. While there are some differences, the values are all close enough in the different methods that the same basic conclusions will follow. The discussion below will use the results from row (1).

TABLE 3-12

Results of Regressions
Predicting Status From Personal Characteristics & Education

	r_{12}	r_{13}	r_{23}	p_{21}	p_{31}	p_{32}
(1)	.644	.442	.469	.644	.239	.315
(2)	.713	.453	.469	.713	.241	.297

Now let us consider what these path values mean. First of all, we note that the direct causal impact of educational attainment on occupational status ($p_{32} = .315$) is stronger than the direct causal impact of personal characteristics on status ($p_{31} = .239$). Should we conclude from that that educational attainment is more important than personal characteristics in producing occupational status? That turns out not to be an answerable question, in that form. But suppose we were to clarify the question as follows: Which would make a greater difference in occupational status, giving a person a one standard deviation increase in "personal characteristics" or giving him a one standard deviation increase in educational attainment? In that form we can answer the question, and the answer is that the one standard deviation increase in personal characteristics would have a substantially greater positive impact on occupational status. And that is because the personal characteristics are earlier in the causal chain.

Let us show why this is true, using the data from our model. First

of all, let us consider what happens to a particular individual (with a given set of personal characteristics) who is given a one standard deviation increase in educational attainment. He would realize (on the average) a .315 standard deviation (SD) increase in occupational status—or, more precisely, his occupational status can be expected to be .315 standard deviation units higher than would otherwise have been the case. (This is because path p_{32} has a value of .315)

Now what would happen to an individual given a one standard deviation increase in personal characteristics? For one thing, this would have a direct effect of increasing occupational status by .239 SD (because path p_{31} is .239). The direct effect in this case refers to the impact of personal characteristics if education were unchanged or held constant. But is that what would be expected to happen? Not at all. The path p_{21} indicates that a one standard deviation increase in personal characteristics would also cause a .644 SD increase in educational attainment. In other words, two things are going on, involving two different causal paths. First, a bright individual from a high SEL family would be likely to get a higher status job, even if he had no more education than another less advantaged individual. Second, in the real world as presently constituted, if you could make an individual one standard deviation higher in personal characteristics you would also make him .644 SD better educated (on the average), and he would then have both things going for him. So what we have here is what the path analysts call an indirect causal effect. An increase in person characteristics would increase educational attainment and that in turn would increase occupational status. How much? The one standard deviation increase in person characteristics is worth a .644 increase in educational attainment (path p_{21}). And if a one SD increase in educational attainment is worth a .315 increase in occupational status (path p_{32}), then a .644 increase in educational attainment is worth a .203 increase in occupational status (.644 x .315 = .203).

When we put together the direct causal effect of person characteristics (i.e., path p_{31} , the part that does not take place "through" educational attainment), plus the part that does take place indirectly through educational attainment (paths $p_{32} \cdot p_{21}$), we add effects of .289 SD and .203 SD and we say that a one SD increase in person characteristics is

worth a total of .442 SD of occupational status. And this is much larger than the .315 SD increase in occupational status that a one SD increase in educational attainment is worth. The difference occurs because educational attainment comes later in the causal chain, so when it is changed we don't assume any change in the prior person characteristics. On the other hand, when we make a change in person characteristics, we assume that everything subsequent to that in the causal chain gets changed. The moral of the story is that if you want to make a difference in occupational status, it is better to get your ticks in early. Whatever can be done to raise academic aptitude, interest and performance prior to high school will have a sort of "double impact" on later occupational status.

Footnotes

¹ Respondents were asked to describe in which of eight categories of urbanicity they lived. There were some small differences which are not completely captured by only a four category version, but the smaller number of categories accounts for most of the variance. Given the rather weak relationships, there are no important distinctions being ignored. In one case, employment, the four category version actually explains more variance (adjusted) than the eight category one.

² These data, which are based on 1973 conditions, were generously supplied by James N. Morgan, who collected the data for a study funded by the Office of Economic Opportunity (Morgan et al., 1974). The counties originally used in the Youth in Transition sample (in 1966) overlap completely with the counties in Morgan's study. However, by 1974 many respondents had moved to different counties, so there is a considerable amount of missing data for these county level variables.

³ These correlations are not equal to those in Appendix G, because the latter are based on the total sample, while the former are based on a reduced sample.

CHAPTER 4

JOB SATISFACTION

To understand fully the job attainments of young men it is necessary to examine not only the objective measures of attainment, such as status and pay, but also the individual's own subjective sense of his attainment as represented in a measure such as job satisfaction. In this chapter we examine the satisfaction of the YIT panel with their jobs. We ask first how satisfying they find their work. Next we examine the correlates of satisfaction in an attempt to explain the different levels of satisfaction expressed by the respondents. Among the correlates we look first at the role played by education to see if those with more education have more satisfying jobs. Then we turn to the characteristics of the jobs which youth secure to identify those aspects of the work itself which are most important for satisfaction.

Levels of Satisfaction

The concept of job satisfaction was operationalized quite simply in this study. A single item asked the respondent to consider his job overall and indicate his satisfaction on a five-point scale. The item is shown below in Table 4-1. (At Time 4 there was both a single-item measure and a more complex multi-item index of satisfaction. As reported in an earlier publication (Johnston and Bachman, 1973), the single item did almost as well as the more complex version. For this reason, only the single item was included in the Time 5 data collection.)

The Time 4 distribution of satisfaction is skewed with 69% of the respondents falling in the top two categories, "very" and "quite" satisfied. For convenience in subsequent comparisons we collapse these top two categories of satisfaction and say that 69% of the respondents were "satisfied" with their jobs. At Time 5 the distribution is still skewed, but it has shifted downwards, with the percentage satisfied declining from 69% to 61%. Logically, this decline could be an artifact resulting from the fact that over 500 additional panel members had entered the labor force between Time 4 and Time 5 and were not included in the satisfaction

Table 4-1

Job Satisfaction at Time 4 and Time 5 Among Full-Time Workers

"All things considered, how satisfied are you
with your work experience on your present (or
most recent) job?"

	Time 4		Time 5		Working full-time at both Time 4 and Time 5			
	<u>N</u> <u>Z</u>		<u>N</u> <u>Z</u>		<u>N</u> <u>Z</u>		<u>N</u> <u>Z</u>	
5. Very satisfied	150	36	237	24	128	35	95	26
4. Quite satisfied	139	33	367	37	118	33	131	36
3. Somewhat satisfied	70	17	251	25	61	17	86	24
2. Not very satisfied	42	10	88	9	38	10	35	10
1. Not at all satisfied	18	4	44	5	17	5	13	4
Total	419	100%	991	100%	362	100%	360	100%
Mean	3.86		3.68		3.83		3.72	
S.D.	1.14		1.07		1.16		1.07	

Note. The questions asked at Time 4 and Time 5 differed in two ways. At Time 4 the question asked only about "present job" while at Time 5 the stem was modified to say "present (or most recent) job" to make it applicable to those who were primarily in the labor force, but were unemployed at the time of the interview. A second difference concerned the administration: the Time 4 question was part of a personal interview while the Time 5 question was part of a self-administered questionnaire.

data. But, as the right-hand columns of the table show, this decline is replicated in the satisfaction data of the subgroup who were working full-time at both Time 4 and Time 5. In sum, about two-thirds of the working respondents found themselves in "satisfying" jobs at about age 19 and this proportion decreased by the time the panel had reached age 23.

How are these data to be judged? Should they be described as indicating high or low satisfaction? To interpret these data it is necessary to examine comparable data from a broader spectrum of the labor force. The results of seven national surveys conducted between 1958 and 1973 have recently been summarized by Quinn et al. (1974). Each of the surveys contains single-item measures of satisfaction quite similar to the Youth in Transition item. To report these findings, Quinn and his colleagues also collapse the two categories describing the highest satisfaction and use this figure to represent the percentage of "satisfied" workers. Looking at the data for males between the ages of 21 and 65, these authors conclude that job satisfaction was constant for this group between 1964 and 1973, and the percentage of satisfied workers was between 88% and 92%. However, breakdowns by age show that younger workers (16 - 21 or 21 - 29) were invariably less satisfied than their elders, with the percent satisfied varying unsystematically between 75% and 88%. This leads the authors to conclude that "younger workers have been consistently less satisfied than their elders for the last 15 years and, probably, even earlier than that" (p. 12).

Based on these findings the Youth in Transition data must be judged as indicating relatively low job satisfaction among these young workers; indeed, their satisfaction may be even lower than the average suggested by earlier national studies. Further, if we could be convinced that method differences (personal interview at Time 4 versus self-administered questionnaire at Time 5) were not operating here, we would suggest that satisfaction may decline slightly during the first few years of work experience.

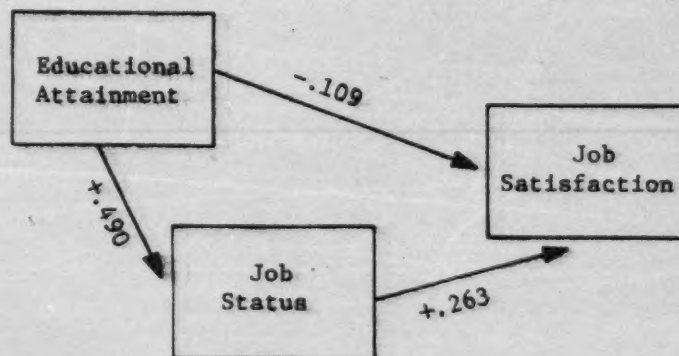
Education, Status, and Satisfaction

In an earlier chapter we noted that educational attainment was strongly associated with the status of attained occupation ($r = .49$). In this chapter it is appropriate to ask whether education and job status are in turn related to job satisfaction. The data are shown below.

	Product-moment correlations	
	<u>1</u>	<u>2</u>
1. Educational attainment		
2. Job status (Duncan scale)	.49	
3. Job satisfaction	.02	.21

Status of attained job relates moderately to job satisfaction ($r = .21$). The correlation is low enough to make it quite clear that other factors besides status influence how one feels about this job.

Educational attainment appears to be completely unassociated with job satisfaction ($r = .02$). However, the bivariate relationship does not tell the whole story. A multiple regression laid out in path analysis form shows the following picture.



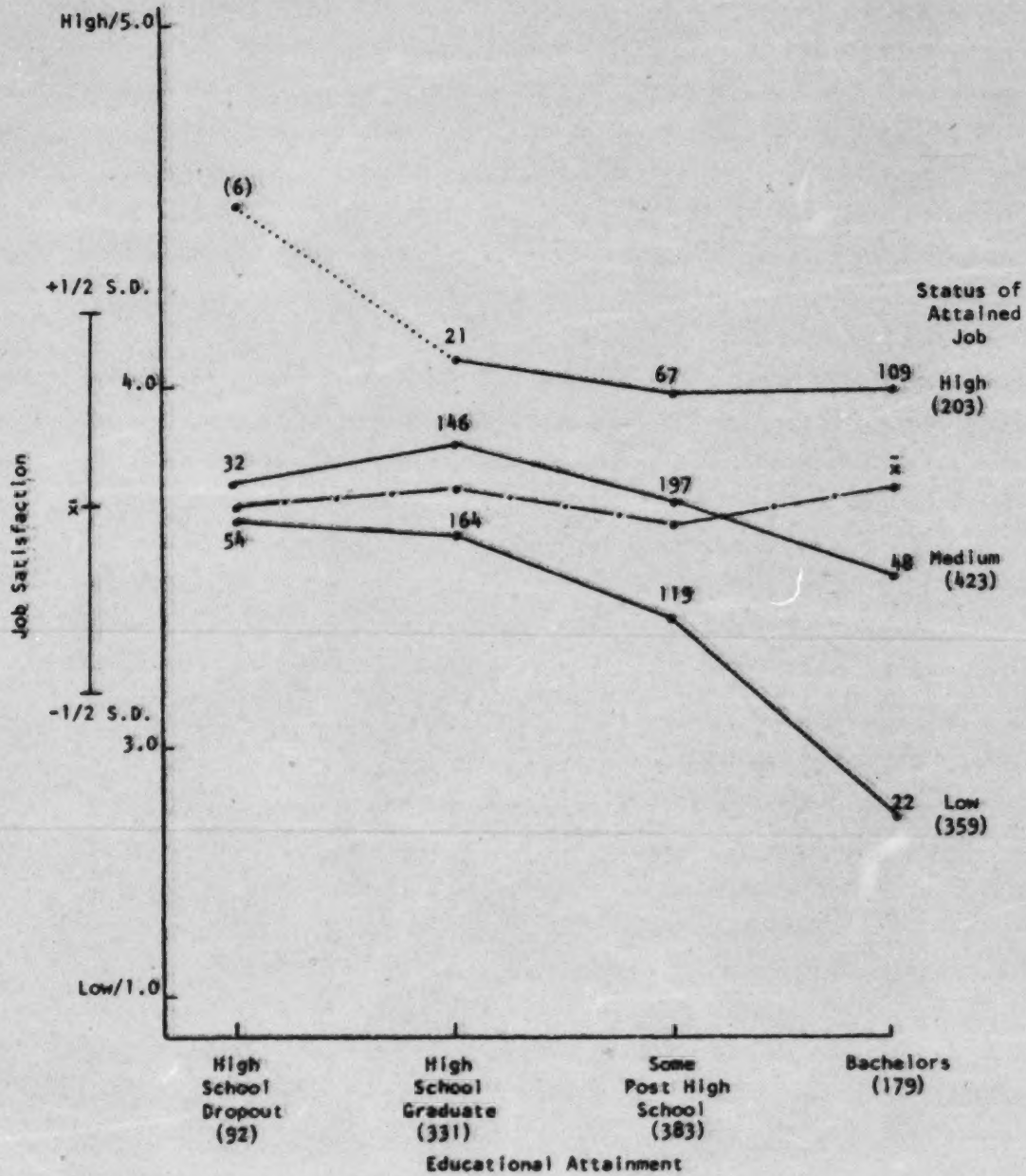
The lower two arrows show that educational attainment leads to a higher status job, which in turn, leads to higher job satisfaction. This "path" from educational attainment to job satisfaction is a positive .129 ($.490 \times .263$). However, controlling for job status, we find that educational attainment is negatively related to satisfaction; the "path" has a value of $-.109$. This means that within levels of job status the higher educated are less satisfied. Together, these two effects of educational attainment, $-.109$ and $+.129$, neatly cancel each other out and the bivariate relationship shows up as $r = .02$.

The dynamics are illustrated in a different way in Figure 4-1. This figure shows the relationship of educational attainment to satisfaction within levels of attained job status. The overall relationship of education to status is quite flat. However, in two extreme "mismatch" categories (youth with "some college" or a "bachelors" holding low status jobs) the trend toward low satisfaction is quite pronounced. Apparently, those with higher education have higher aspirations and failure to attain these aspirations (securing a job of lower status than one's peers with similar education) leads to low levels of satisfaction.

Given the small size of the deviating subgroups, this pattern could be dismissed as interesting but unimportant. However, recent demographic trends suggest that these subgroups could be increasing in the future. In a recent article, George Brown (1976) projects that by 1990 there will be large increases in the number of people with post-high school training. "The adult population with some college training was 15 percent in 1960. Today it is 25 percent. And fifteen years from now over one-third of the adult population will have had a year or more of college level work" (p. 31). If this projection is accurate and there is not a commensurate growth in the availability of higher status jobs we can project that the negative path between education and satisfaction will become even larger and that average levels of satisfaction will decline, caused by the growth of a group unable to find jobs which match their image of what they were trained for.

FIGURE 4-1

Education and Job Status Related to Job Satisfaction



The above findings are corroborated in a recent special report by Quinn and Mandelovitch (1975) entitled, "Education and Job Satisfaction: A Questionable Payoff." After reviewing nine national studies of the American work force they reached the following conclusions:

All of the observed relationships [between education and satisfaction] were modest at best, the correlations never exceeding .12. There was clearly no increment in job satisfaction with each succeeding year of education. (p. vi)

However, when the authors examined several measures of the match between a worker's educational level and the educational requirements of his work a different picture emerged. Various measures of "over/under educated" for the job were associated with satisfaction at the eta levels of .14 to .21. The authors noted further:

...It was not deviation [of a worker's education from the educational requirements of the job] per se that was associated with dissatisfaction, but only deviation in a particular direction--where a worker was too highly educated for his or her work. The under-educated workers were particularly well satisfied, perhaps because of their evident successes in having attained occupations better than they might have anticipated on the basis of their educational attainments alone..

It may therefore be concluded that the relatively small payoffs in job satisfaction that accompany increasing education can be more than offset when job demands fail to keep pace with educational attainment. (pp. 26-27)

Characteristics of Satisfying Jobs

If status and education are not strong determinants of job satisfaction, what factors are more important? The most obvious place to look is among the characteristics of the jobs themselves. It is quite apparent that there are differences between the job of store manager and assembly-line worker in terms of the nature of the task, the nature of the work environment, and extent of supervision. If job satisfaction varies with some of these qualities of work, then there ought to be differential satisfaction expressed by those who hold these different jobs. Table 4-2 shows that this is indeed the case. Using a 9-category Census Bureau classification scheme, the mean satisfaction scores were computed for each occupational group. An eta of .28 confirms that there are indeed significant differences in satisfaction across these different job type categories. The pattern is not surprising; those who are most satisfied are in managerial and professional jobs, while those least satisfied hold laborer and service jobs. While these data are suggestive, they do not identify directly the characteristics of professional and managerial jobs which make them so highly satisfying or the characteristics of laborer jobs which make them so much less satisfying. We turn now to a search for some of these specific characteristics.

Facets of a Job. What facets do young men discern when they look at their job? We answered this question by presenting the YIT respondents with a list of job descriptions and for each description asking, "how true is this" of your job? The descriptions used were identical to the list used to assess attitudes towards an ideal job (see Chapter 8), except that for assessing job attitudes, respondents were asked "how important" each job facet was for the job they would like to have. The items are shown below in Table 4-3. While the items do not represent the entire universe of possible job facets, they do cover a wide range, including both extrinsic reward facets (F15: the pay is good) and intrinsic reward facets (F9: I can learn new things, learn new skills). The correlations among the items were examined and a correlogram constructed which showed the most interesting linkages among items. (For

Table 4-2

Average Job Satisfaction for Nine Categories of Jobs

<u>Census Job Category</u>	<u>N</u>	<u>Average Satisfaction Score^a</u>
1. managerial	94	4.20
2. farmer/farm laborer	22	3.95
3. professional/technical	139	3.92
4. craftsman	206	3.84
5. sales	37	3.62
6. clerical	70	3.57
7. operative	220	3.45
8. laborer	82	3.22
9. service worker	37	3.22
	<u>907</u>	
Mean		3.69
S.D.		1.07
eta		.287

^a5 = very satisfied, 1 = not at all satisfied

Table 4-3
Job Description Items

F2. How often do you get a chance to work with a supervisor in planning what you work will be -- like what you will be doing, or how you should do it?

5. Almost always	26.1%
4. Often	27.9
3. Sometimes	19.6
2. Seldom	15.5
1. Never	10.9
	100%

In an earlier section, we asked you some questions about the kind of job you'd like to have. Here are some questions about your present job--how true is each of the following statements for the job you have now? (or for your most recent job, if you don't have a job now.)

	How true is this for your present (most recent) job?			
	Not at all true			
	A little true			
	Very true	Pretty true		
	4	3	2	1
F7. There's no one to boss me on the work.	9.9	25.8	28.3	36.0
F8. It is steady, no chance of being laid off. . .	39.0	35.8	13.9	11.3
F9. I can learn new things, learn new skills . . .	35.6	30.0	25.1	9.3
F10. I don't have to work too hard.	8.5	28.8	36.2	26.5
F11. It is a clean job, where I don't get dirty . .	16.3	19.9	22.1	41.7
F12. It has good chances for getting ahead.	28.3	31.1	28.4	12.2
F13. I don't have to take a lot of responsibility .	5.8	14.9	32.2	47.1
F14. It leaves me a lot of free time to do what I want to do.	9.3	25.7	41.3	23.8
F15. The pay is good.	21.3	44.2	23.1	11.4
F16. It is a job that my friends think a lot of-- has class	8.2	26.3	39.7	25.8
F17. It uses my skills and abilities -- lets me do the things I can do best	23.9	34.6	22.8	18.7
F18. There are nice friendly people to work with. .	39.1	45.8	13.1	2.0
F19. It doesn't make me learn a lot of new things .	9.2	13.3	27.9	49.6

Note. N = 1026

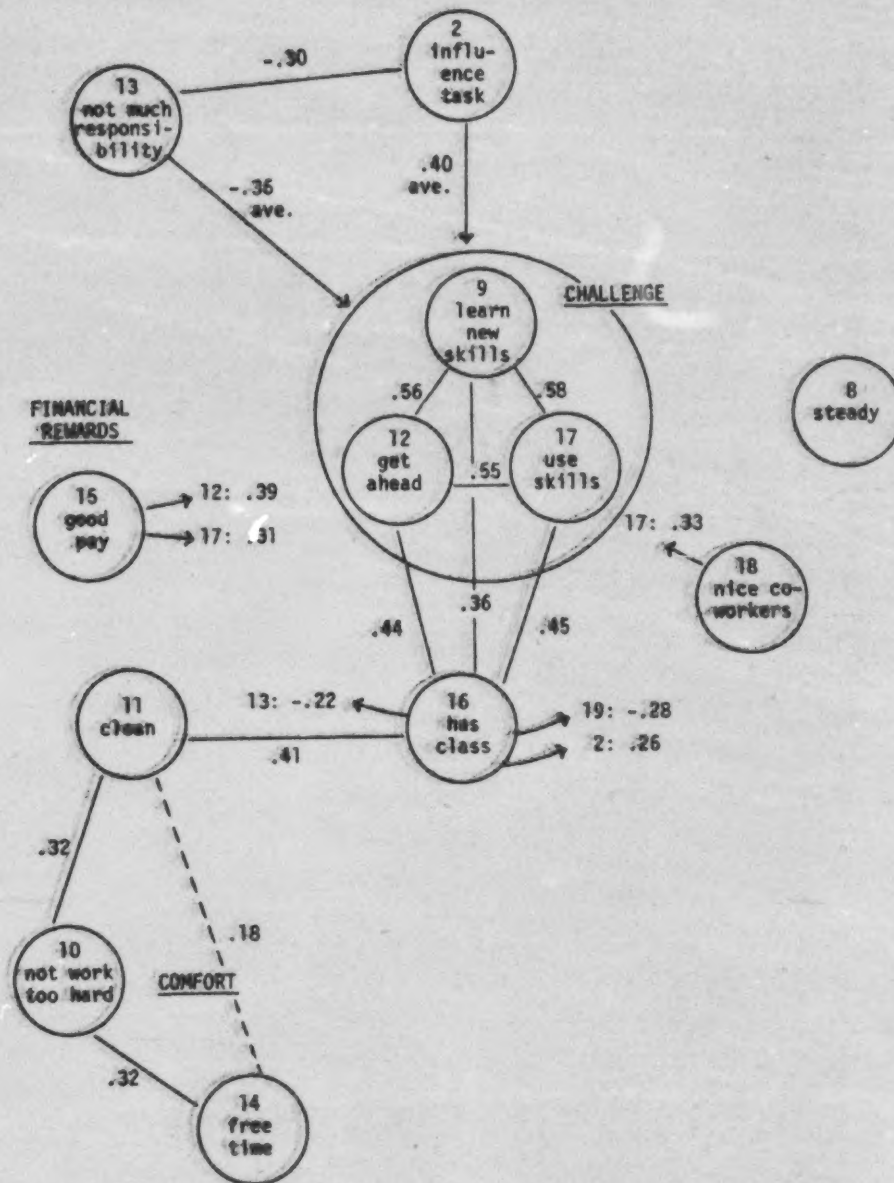
a number of reasons factor analysis was deemed inappropriate for this task.) The results are shown in Figure 4-2. Three items in the center of the correlogram stand together as a cluster: a job that uses one's existing skills (F17), teaches new skills (F9), and has related opportunities for advancement (F12). This cluster of self-development items might be labelled "Job Challenge." Correlated with challenge, but different in meaning, are two items: opportunity to influence the task (F2) and amount of individual responsibility required (F13). Financial reward (F15) is independent of most items, but correlates .31 with utilizing one's skills (F17) and .39 with opportunities for advancement (F12). A loose cluster of items is formed by three items which might be labelled Job Comfort: do not need to work too hard (F10), the job leaves a lot of free time (F14), and the job is clean (F11). Item F8, whether or not a job is "steady, no chance of being laid off," is independent of the other facets; having nice co-workers (F18) is independent of most facets except utilizing one's skills.

The one remaining item in the figure is F16, "It is a job my friends think a lot of--has class." This phrase does not describe a characteristic of the job in the same sense as the other items, and is not properly classified as a job facet. But it is interesting to see which job characteristics are most strongly associated with a "class" job. A job that is described with this term is one that uses one's skills ($r = .45$), has opportunities for advancement (.44), is a clean job where one doesn't get dirty (.41), and to a lesser extent has associated with it opportunities to influence the task (.26) and exercise some responsibility (.22).

The purpose of the above exercise is to demonstrate that these youth in describing their jobs can distinguish among many different dimensions or facets. From our limited domain of 14 descriptors they distinguished at least seven different dimensions. Before asking how these job facets relate to satisfaction, it might be asked whether or not they are veridical -- do they actually describe the respondents

FIGURE 4-2

Correlogram of Job Facet Items



Note: Item 7 is excluded because it did not correlate in any meaningful way with any other items or with satisfaction. Item 19 is excluded because it is essentially the opposite of item 9. Criterion for clustering was an average correlation of .40 and conceptual similarity.

job? This same question arose in the national Survey of Working Conditions conducted in 1969 and 1973 at the University of Michigan. These studies used a more extensive list of job facets than YIT. A separate study was carried out to validate worker ratings of job facets. Observers were sent to the job sites of workers in the study to collect independent data on job facets. This validation study demonstrated that workers' reports were largely veridical, and do not represent distorted perceptions of job conditions (Cammann et al., 1976).

How the Facets Relate to Satisfaction. To see which characteristics of jobs are most relevant to satisfaction, the job facet items were correlated with the measure of Time 5 job satisfaction. The results are shown in Table 4-4. The facet that correlates most highly with job satisfaction is the opportunity the job offers to utilize one's skills ($r = .59$); this facet by itself can account for 35 percent of the variance in overall satisfaction. Two other Job Challenge items correlate quite highly: opportunity for advancement ($r = .51$) and the chance to learn new things ($r = .49$). Next in order is the opportunity to influence what the work is going to be or how it is to be carried out ($r = .42$).

Correlations in the mid-30's are associated with friendly co-workers (.35), good pay (.34), and the individual's perception of job status -- the job has "class" (.36). Whether or not the employment is steady is quite low in association (.21). Of little importance to satisfaction and the Job Comfort dimensions -- clean job, easy work, free time.

Measurement issues prevent us from making precise comparisons of the relative importance of each facet. However, it is quite interesting to note that pay is quite low on the list of facets. Intrinsic reward characteristics in the Job Challenge category appear more relevant to an individual's sense of satisfaction with his work than does monetary reward or job security. This is not to argue that money or security are unimportant, only that for young men they are not the keys to a satisfying job.

Table 4-4

Ratings of Job Facets Correlated with Satisfaction
(Time 5 Measures)

<u>Ques. No.</u>	<u>Job Facet^a</u>	<u>Product-moment correlation with satisfaction^b</u>
F17.	Uses my skills and abilities	.59
F12.	Good chances for getting ahead	.51
F9.	I can learn new things	.49
F19.	It doesn't make me learn new things	-.44
F2.	I can influence the job	.42
F16.	Has class—my friends think a lot of it	.36
F18.	Nice friendly co-workers	.35
F15.	The pay is good	.34
F13.	Don't have to take a lot of responsibility	-.29
F8.	Job is steady	.21
F7.	No one to boss me on the job	.18
F11.	Clean job	.10
F14.	Leaves me a lot of free time	.06
F10.	Don't have to work too hard	-.02

^a"How true is this of your job?" (4) "very true" to (1) "not at all true."

^bFull-time workers at Time 5, N = 967, $r_{.05} = .063$.

The relationships noted above suggest some reasons for the observation made earlier that young workers are less satisfied with their jobs than older workers. Jobs at the entry level in the labor force are not those characterized by utilizing worker skills or allowing the worker to exercise influence over the type of task or the way the work is carried out. Additionally, in a system which rewards seniority the more satisfying jobs are reserved for the older workers. Indeed, we noted a possible decline in worker satisfaction between ages 19 and 23. This could be explained by the seniority notion if one reasoned that the pace of advancement into the jobs with more satisfying employment conditions was much slower than youth expected. Nineteen-year-olds could be satisfied with relatively poor employment conditions on the expectation that job advancement would lead to improved conditions in a few years. When several years passed and the "better" jobs were still in the future, the youth could register their disappointment by indicating lower job satisfaction.

Additional insight into the weak association between education and job satisfaction is gained by looking at the predictability of job facets from educational attainment. The data are shown in Table 4-5. There is a statistically significant relationship between education and about one-half of the job characteristics listed. But the strength of association is very weak, especially for those job characteristics which are most highly related to satisfaction. Education is a strong predictor of only one facet -- getting a job which is "clean"; and the association of this facet with satisfaction is only $r = .10$. The message seems clear -- education does not open up jobs which are intrinsically more satisfying; those with the lowest levels of education are as likely to secure a satisfying job as are the college graduates. Indeed, those with education beyond high school run a greater risk of having to take a job which does not match their expectations or skills and as a result being less satisfied with their work experience than those with less schooling.

Table 4-5
 Predictability of Job Characteristics
 From Educational Attainment

<u>Ques. No.</u>	<u>Job Facet</u>	<u>Importance for Satisfaction (P-M Correlation)</u>	<u>Predictability of Facet from Educa- tional Attainment</u>
F17.	Uses my skills	.59	.128*
F12.	Opportunity to advance	.51	.120*
F9.	Learn new things	.49	.128*
F2.	Influence task	.42	.116
F18.	Nice co-workers	.35	.076
F15.	Good pay	.34	.127*
F13.	Not much responsibility	-.29	.168**
F8.	Steady job	.21	.100
F11.	Clean job	.10	.354**
F14.	Free time	.06	.059
F10.	Not work too hard	-.02	.074

^aEta for an 8-category educational attainment measure predicting to each job facet. A statistically significant eta at the .05 level (*) is .120; at the .01 level (**) is .130 when N = 1000.

CHAPTER 5

SELF-ESTEEM AND ATTAINMENT: AN ANALYSIS OF CHANGE AND STABILITY

Most people believe that social environments and experiences can have lasting impacts on personality characteristics; indeed, the most basic purpose of the Youth in Transition project has been to measure and analyze some of these impacts. But it is also commonly assumed that variations in personality characteristics lead different people to be exposed to different sorts of environments and experiences; and the preceding section has demonstrated that differences in background, ability and prior experiences have a good deal to do with both educational and occupational attainment. Thus the causal linkage between environments and personality must be viewed as a two-way street--environments and events shape people, but people also play an important part in selecting and shaping their own experiences.

In the next several chapters we examine a wide range of personality and behavior dimensions which have been measured at several points in time--in many cases the full eight-year longitudinal span of the Youth in Transition project. Unlike the previous section, in which such characteristics were viewed as predictors of educational and occupational attainment, we now study these dimensions of values, attitudes, self-concepts and behaviors as outcomes--as "dependent variables" or "criterion dimensions." As we look at each outcome dimension in turn, we will ask whether differences in environments and experiences during the late teens and early twenties are linked to differential patterns of change--do some experiences seem to have different impacts than others?

We begin with a detailed exploration of self-esteem and its relationships with educational and occupational attainment. We have

chosen to study self-esteem in depth for at least three reasons: First, there has been a considerable amount of interest in this dimension of personality. Second, we think our own findings in this area are unique and provocative. Finally, self-esteem seems particularly well-suited for illustrating the complexities of longitudinal analysis--the difficulties we encounter as we attempt to understand the two-way street of causation linking different people to different experiences.

Self Esteem: Theoretical Perspectives and Past Research

Self-esteem has long been the subject of theoretical speculation, and more recently has been the topic of several major empirical studies (Coopersmith, 1967; Rosenberg, 1965; Rosenberg & Simmons, 1971). Gergen (1971) and others who have reviewed the literature in this area have noted that the term self-esteem has been used in various ways by different authors. Our own approach has been heavily influenced by the work of Rosenberg and also that of Coopersmith. Like these authors, (a) we use the term self-esteem to refer to an individual's self-evaluation or judgment of his own worth, (b) we treat it as a global dimension rather than as a number of more specific ones, and (c) we view it as a relatively enduring characteristic rather than something which shifts abruptly from one situation to another.

An additional perspective on self-esteem has been provided by French and Kahn (1962), who argued that "The various dimensions used by the person for perceiving himself and others are not all equally important to the person. They may vary in centrality, defined as the degree to which they determine the person's self-esteem" (p.19). This notion that different aspects of the person may be differentially central to self-esteem is also found in the work of Douvan and Gold (1967), who noted that one of the more important components of self for most adolescent boys (in contrast to girls) is a sense of competence and achievement expressed in competitive fields such as

athletics, work and intellectual activity. The concept of centrality, as used by these authors, is not incompatible with a treatment of self-esteem as a single global dimension; it simply suggests that there can be variations and changes in the relative weights--i.e., the centrality--of the several components which jointly constitute global self-esteem.

In this chapter we focus largely upon the links between self-esteem and success--specifically, educational and occupational attainments of young men in their early twenties.¹ A number of authors have presented or summarized evidence that self-esteem is linked to educational and occupational attainment (Coopersmith, 1967; Gergen, 1971; Rosenberg, 1965; Rosenberg & Simmons, 1971; Wylie, 1961), and our own earlier work provides further support (Bachman, 1970, Appendix D). Particularly relevant is Purkey's summary of the research relating the self-concept to school achievement. He concludes that "...there is no question that there is a persistent relationship between the self and academic achievement..." And, although the data do not provide clear-cut evidence about causal direction, he interprets the findings as showing "...that there is a continuous interaction between the self and academic achievement, and that each directly influences the other" (Purkey, 1970, p. 23). In the area of occupational success, Luck and Heiss (1972) report that self-esteem is positively linked to a number of job dimensions, including income, prestige, upward mobility, and personal satisfaction with occupational achievement; and Kaufman (1973) reports that loss of a job resulted in diminished self-esteem among a group of professional engineers and scientists.

In sum, there is reason to believe that self-esteem is linked to educational and occupational attainment, and that this linkage probably involves a number of different and complexly interrelated patterns of causation. While it is a rather simple matter to point out the complexities, the problem of disentangling such reciprocal causation is extremely difficult and vexing. In most cases, the empirical evidence is limited to a static relationship at a single

point in time--e.g., survey respondents with higher levels of educational attainment also have higher mean scores on a measure of self-esteem (Weidman, Phelan, & Sullivan, 1972). While such findings are important in demonstrating that a relationship does exist, they leave us largely in the dark about causal dynamics.

The present study is not limited to a single point in time. Our measures of self-esteem span the high school years as well as the five years after high school--a period in which most of our respondents completed formal education and entered the labor market. Our measures of educational and occupational attainment are based on data collected at the end of the study. These data on self-esteem and attainment, plus a number of additional measures of background, ability, and other characteristics, permit us to go several steps beyond the usual cross-sectional analyses and interpretations.

Patterns of Causation

Before turning to the analysis of these data, let us be more specific about the relationships we expect to find and the bases for these expectations. We can distinguish three logically distinct patterns of causation, all of which may play some part in the relationship between self-esteem (A) and attainment (B):

A causes B: Self-esteem contributes directly to attainment. Individuals with positive self-concepts are likely to be ambitious, i.e., they will set relatively high levels of aspiration. Moreover, their positive views of their own abilities and competence will help them to withstand the occasional setbacks and reversals along the road to educational and occupational attainment.

B causes A: Attainment contributes, both directly and indirectly, to heightened self-esteem. Educational and occupational attainments represent important sources of direct feedback about the self, and this may be particularly true for adolescents and young adults. There are indirect effects as well; those individuals with the most

education and the highest status jobs are most likely to be exposed to "ego-boosting" experiences in their day-to-day activities.

C causes both A and B: Some of the underlying determinants of self-esteem are also important determinants of attainment. Academic ability, past educational accomplishments, and family socioeconomic level are all likely to contribute to a young person's self-esteem. But these factors of background and ability also directly influence educational and occupational attainment. Thus, an additional reason for expecting self-esteem to be correlated with the attainment is not that one causes the other, but rather that self-esteem and attainment have a number of antecedents in common (the "C" variables).

Shifting Centrality. The three logical patterns of causation outlined above have been stated in somewhat "fixed" or permanent form. For example, if we say that educational success contributes to increased self-esteem, this implies that such will be the case whether the individual is beginning high school, ending high school, or somewhere in college. But this makes no allowance for the possibility that there may be shifts along the dimension of centrality--the possibility that some aspects of the self which are important determinants of self-esteem at one stage in life may become less important at a later stage. If we were to find a more-or-less gradual shift in the strength of relationship between self-esteem and any factor of background, ability, or attainment, that might be evidence of an increase or decrease in that factor's centrality for self-esteem. For example, we might expect that things having to do with occupational attainment would become increasingly important to young men in general as they leave school and enter the job market. On the other hand, things having to do with educational success might become less important, at least among those who do not continue their education beyond high school.

The several perspectives on causal relationships and centrality reviewed here are not presented as testable hypotheses. Rather, they

are conceptual guidelines that we will refer to from time to time as we examine and interpret relationships among variables.

The Measure of Self-Esteem

Our ten item measure of self-esteem is close to that used by Rosenberg (1965). The first six items in Table 5-1 were adapted directly from his scale; the other four items, similar in content, were developed by Cobb, Brooks, Kasl, and Connelly (1966). Respondents were asked to indicate on a five-point scale how often each item was true for them. The five response categories--almost always, often, sometimes, seldom, and never--were coded from 1 to 5, with higher self-esteem responses. The scale is nearly balanced with six positive items and four negative items. The self-esteem index is an unweighted mean of the ten items, with up to two missing values allowed. Table 5-1 includes the means, standard deviations, and item index correlations (uncorrected for part-whole inflation) for 1966 (Time 1) and 1974 (Time 5). While there is some variability, the item-index correlations are fairly similar across items; generally, the correlations for 1974 are slightly stronger than those for 1966. Factor analyses performed on both the 1966 and 1974 items revealed a strong first factor in each case, explaining 64% of the 1966 common variance and 69% of the 1974 common variance. The item loadings ranged from .38 to .69.

Coefficient alphas are .75, .76, .79, .80, and .81 for 1966, 1968, 1969, 1970 and 1974, respectively. A single test-retest reliability was estimated using a path analysis approach as developed by Heise (1969). This estimate, which assumes that the reliability is the same at each time, is .75. Test-retest reliabilities were also computed for each combination of three measurements, using formulas suggested by Heise (1969). (If three measurements are made at Times A, B, and C, the reliability is computed as $r_{AB}r_{BC}/r_{AC}$.) With five measurement points, there are ten possible combinations of three measurements. Each of the ten reliability coefficients was

Table 5-1

Self-esteem Items and Item-Index Correlations

	1966			1974		
	<u>M</u>	<u>SD</u>	<u>r^c</u>	<u>M</u>	<u>SD</u>	<u>r^c</u>
I feel that I am a person of worth, at least on an equal plane with others. ^a	3.89	.91	.57	4.52	.68	.62
I feel that I have a number of good qualities. ^a	3.72	.82	.56	4.36	.69	.66
I am able to do things as well as most other people. ^a	3.73	.79	.57	4.31	.71	.61
I feel I do not have much to be proud of. ^b	3.87	1.15	.54	4.03	1.01	.55
I take a positive attitude toward myself. ^a	3.64	.89	.59	4.12	.85	.69
Sometimes I think I am no good at all. ^b	3.47	1.06	.58	4.06	.85	.67
I am a useful guy to have around. ^a	3.70	.77	.48	3.99	.75	.63
I feel that I can't do anything right. ^b	3.83	1.02	.56	4.11	.82	.60
When I do a job, I do it well. ^a	3.67	.81	.51	4.35	.63	.51
I feel that my life is not very useful. ^b	3.87	1.08	.62	4.39	.82	.58
Self-esteem index	3.74	.52	---	4.22	.48	---

Note. N = 1,628 with up to 2.5% missing data.

^aResponse of "almost always true" coded 5 (high self-esteem).

^bResponse of "never true" coded 5 (high self-esteem).

^cItem-Index correlation.

computed; the range is .69 to .74, with a mean of .71. All these estimates of reliability, both internal consistency and test-retest, seem acceptably high.

While the reliability of a measure can be estimated in several ways, validity is another matter. The kind of validity appropriate for a variable like self-esteem is construct validity (Wylie, 1974, p. 38). Self-esteem, we hypothesize, should relate to other variables in certain directions, and this provides a possible source of evidence on construct validity. Self-esteem correlates in the expected directions with measures of: intellectual ability, somatic symptoms, negative affective states, happiness, rebellious behavior in school, and needs for self-development and social approval. (See Appendix G for the correlations.)

Overall Changes in Self-Esteem

Self-esteem scores were fairly high for our respondents at the start of tenth grade, and gradually rose to a level one standard deviation higher during the nearly eight-year span of the longitudinal study. The mean scores included in Table 5-2 show a modest increase in self-esteem throughout high school (1966 to 1969), rather little change during the following year (1969 to 1970), and a more substantial increase during the next four years (1970 to 1974). The pattern of change is consistent across all ten of the items in the self-esteem scale; Table 5-1 shows for each item an increase in mean score and a decrease in standard deviation from 1966 to 1974. The decrease in standard deviation may reflect a "ceiling effect" at the item level, since the mean score for each item moved closer to the upper limit of self-esteem. At the index level, however, there is less evidence of a "ceiling effect," since the standard deviation dropped only slightly from .52 to .48.

The pattern of correlations among the five self-esteem measurements, presented in Table 5-2, suggests a process of gradual

Table 5-2
Cross-time Self-esteem Correlations and Stability Coefficients^a

	Self-esteem				
	<u>1966</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1974</u>
Self-esteem in 1966	1.00	.74	.65	.58	.40
Self-esteem in 1968	.53	1.00	.88	.79	.54
Self-esteem in 1969	.48	.64	1.00	.89	.61
Self-esteem in 1970	.42	.56	.65	1.00	.69
Self-esteem in 1974	.30	.40	.44	.49	1.00
<u>M</u>	3.74	3.83	3.88	3.90	4.22
<u>SD</u>	.52	.49	.50	.49	.48
<u>N</u>	1622	1501	1492	1408	1594

^aProduct-moment correlations are below the diagonal; stability coefficients are above. The stability coefficients were computed using a path analysis approach as developed by Heise (1969).

evolution and shift throughout the period we studied. As the table indicates, the longer the time interval between any two self-esteem measurements, the lower the correlation. The table also includes stability coefficients, which are estimates of the "true" cross-time correlations after correcting for unreliability in the measures (Heise, 1969). Again, the longer the time interval, the lower the stability. One exception to this pattern may be worth noting: the correlations and stability coefficients involving self-esteem scores in 1966 were somewhat lower than would be expected strictly on the basis of the time intervals. Thus, for example, the stability of self-esteem scores during the eighteen-month interval from Time 1 to Time 2 was lower than the stability during the twenty-four-month interval from Time 2 to Time 4. Except for the Time 1 data, however, the cross-time stability of self-esteem was almost perfectly linearly predictable from the length of the time interval involved.

Links to Educational Attainment and Related Factors

Educational Attainment. Self-esteem scores for six categories of educational attainment, ranging from high school dropouts to those in graduate school, are presented in Figure 5-1. Consistent with our expectations, we find a positive correlation between self-esteem and level of educational attainment--the higher the level of education a respondent eventually attained, the higher was his self-esteem throughout the course of the study. Indeed, the degree of consistency in the relationship is truly striking; from the start of tenth grade to a point nearly eight years later, the ordering of mean self-esteem scores (from lowest to highest) is identical to the ordering of educational attainment categories, with those who became high school dropouts always lowest in average self-esteem and those who went on to graduate training always highest (differences among the six group means are significant at $p < .001$ for all five times). Moreover, as the eta values and product-moment correlations at the bottom of the figure indicate, the relationship between self-esteem and educational attainment (as we scaled it) is almost perfectly linear.²

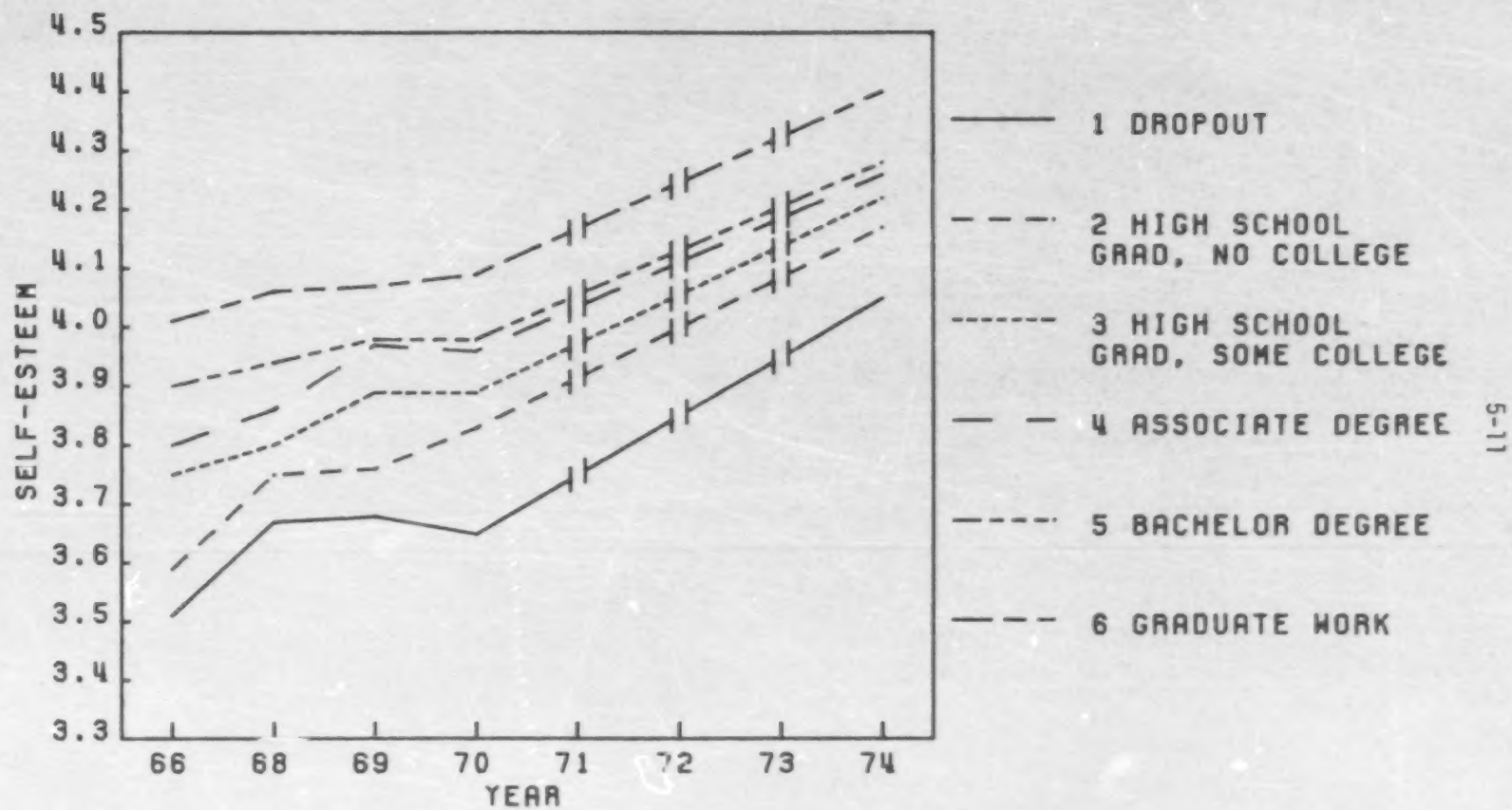


Figure 5-1. Self-Esteem by Educational Attainment

The trend over time for self-esteem is basically upward, with each subgroup showing a largely parallel pattern of increases in mean scores. One exception, while not extremely large, is noteworthy; the self-esteem of high school graduates who did not continue their education (Group 2) rose during the year following high school, whereas the scores for dropouts (Group 1) declined slightly during the same period. This relative loss in self-esteem for the dropout group was mostly of limited duration; four years later (in 1974) the difference between Groups 1 and 2 had shrunk to nearly the same level as occurred during the first three data collections.

The most surprising finding shown in the figure is the fact that self-esteem measured at the beginning of tenth grade correlates more strongly with eventual educational attainment than does self-esteem measured after the educational attainment levels had been reached. This tendency for the self-esteem trend lines to converge during high school and the years that followed is evident in the figure itself (especially if we disregard the relatively small Group 1), and it is also reflected in the drop in correlation values (from $r = .27$ in 1966 to $r = .14$ in 1974, $p < .01$). We will discuss this finding at some length later; for the present, it is sufficient to note that a steady decrease in self-esteem differences among educational attainment subgroups is quite the opposite of what would be projected if we assume a pattern of reciprocal causation between early self-esteem, educational attainment, and later self-esteem.

College Plans Versus Attainment. Most of those who entered college had planned to do so from the start of the study, and this may help to explain the fact that self-esteem measured as early as the start of tenth grade showed a substantial correlation with later educational attainment. On the other hand, quite a few young men initially planned to enter college but did not succeed in doing so, and others who did not plan on college at Time 1 eventually did enter. Earlier analyses of the data from Time 1 through Time 4

demonstrated that shifts in college plans were associated with shifts in occupational aspiration; those who initially planned to enter college but failed to do so showed a substantial drop in status of aspired occupations, whereas those whose initial plans did not include college but who eventually did enter higher education showed a corresponding rise in status of aspired occupation (Bachman et al., 1971, pp. 126-131). This analysis has been extended through Time 5, and the results are presented in Figure 5-2. Note that between Time 1 (start of tenth grade) and Time 3 (end of school for most) there occurred shifts in occupational aspirations that can be interpreted as an adjustment to realities--at least the realities reflected in eventual educational attainments. Note also that the pattern of group differences in occupational aspirations remained essentially stable during the five-year period from Time 3 through Time 5: those who planned to enter college and did so (Group C/C) had the highest mean occupational aspirations, those who did not initially plan to do so but later did enter college (Group NC/C) were next highest, those who neither planned to nor did enter college (Group NC/NC) were lowest in mean occupational aspirations.

When attainments fail to measure up to aspirations, is there a corresponding drop in self-esteem? Coopersmith (1967, p. 29) cited William James' view of self-esteem as reflecting, at least in part, "...the ratio of our actualities to our supposed potentialities..." or the ratio between success and pretensions. This theory suggests that those who planned to enter college but failed to do so (Group C/NC) should show a decrease in self-esteem relative to other groups, whereas the group whose attainments exceeded their initial aspirations (Group NC/C) should show a relative increase. In other words, self-esteem scores should show a pattern of shift somewhat similar to that shown for occupational aspirations in Figure 5-2. The results for self-esteem, presented in Figure 5-3, clearly fail to confirm these expectations. Instead, we find that self-esteem scores, if anything, "anticipated"

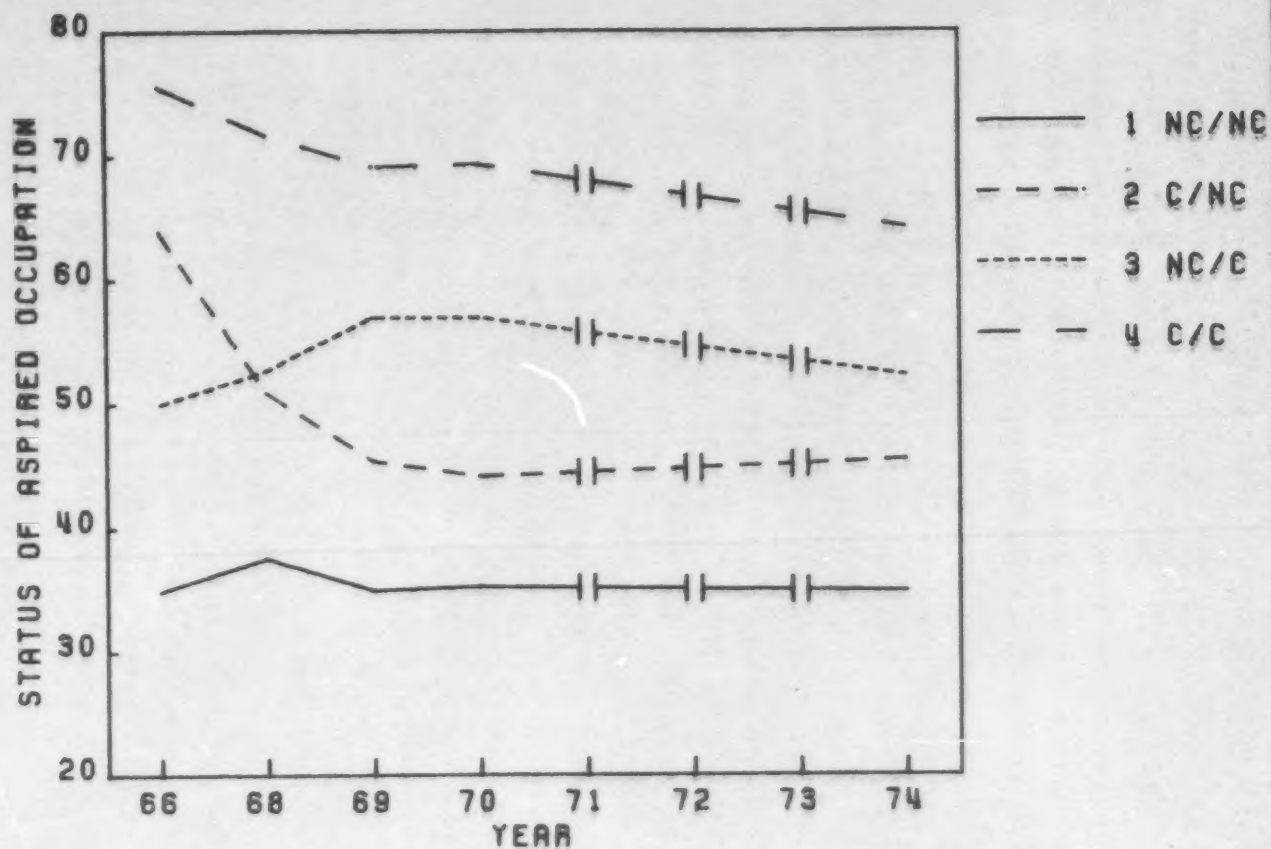


Figure 5-2. Status of Aspired Occupation by College Plans vs. Attainment

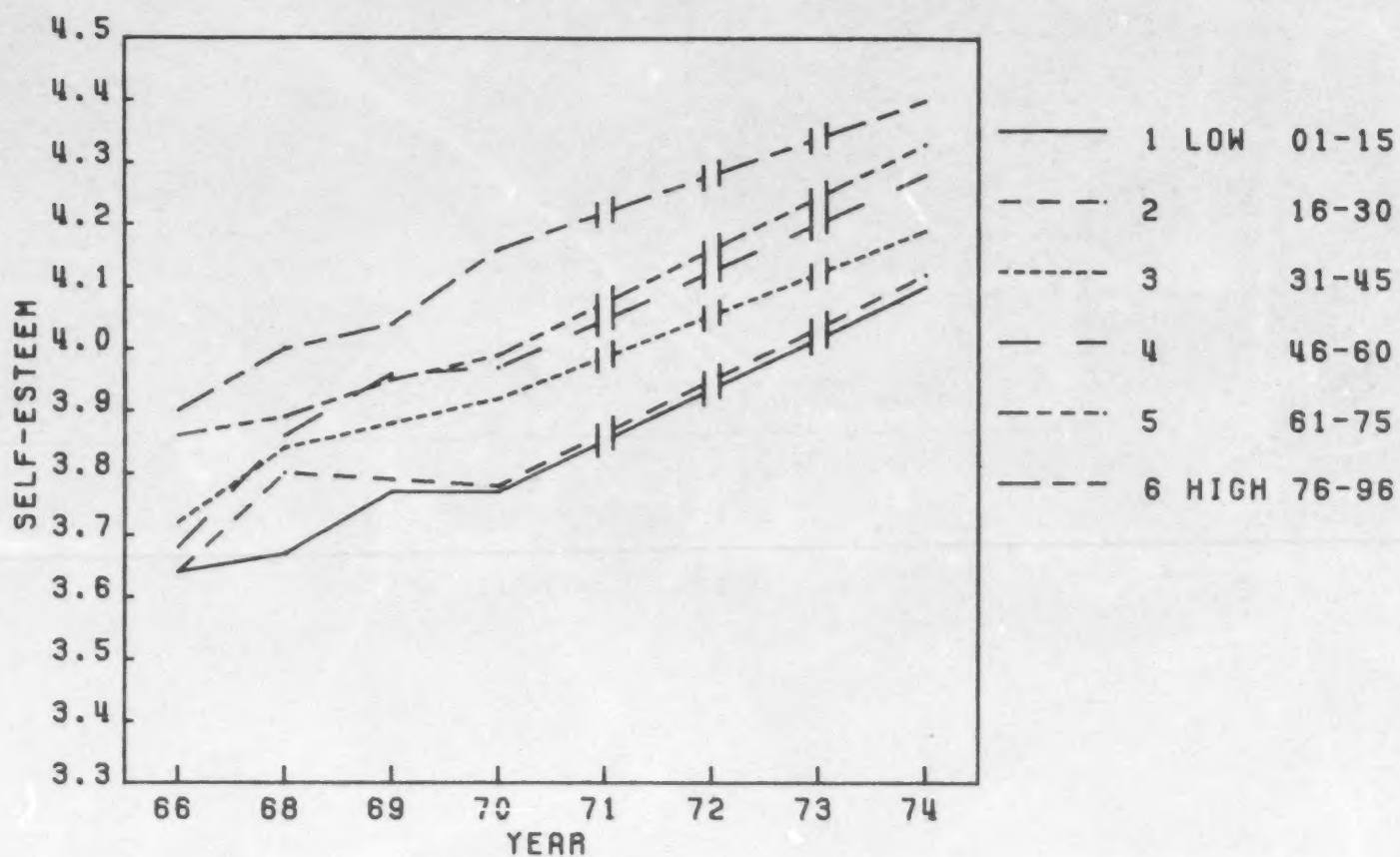


Figure 5-3. Self-Esteem by Occupational Attainment

the later shifts in educational and occupational aspirations. Throughout all five points in time the mean self-esteem scores for the four groups were ordered in the same way as occupational aspirations were ordered from Time 3 to Time 5--the C/C Group was highest, NC/C next highest, C/NC lower, and NC/NC lowest. And here again, as we saw earlier in Figure 5-1, the differences in self-esteem are stronger at Time 1 than at later points in time (eta values drop from .27 for Time 1 self-esteem to .13 for Time 5 self-esteem).

How can we account for this finding that self-esteem scores seemed to "anticipate" educational attainments and later occupational aspirations for the four subgroups we have just been examining? One possibility, of course, is that self-esteem is among the causes of attainment (A causes B). An alternative explanation is that other (prior) factors which play an important part in determining educational attainment also contribute to self-esteem (C causes both A and B). We set out to investigate the latter possibility by examining three dimensions known to have an important impact upon college entrance: academic ability, high school grades, and family socioeconomic level. Along each of these dimensions the four groups showed the same ordering as was found for self-esteem--C/C highest, NC/C next highest, C/NC lower, and NC/NC lowest--and the relationships were quite strong (eta values ranged from .41 to .50). These findings suggest that factors such as ability, grades, and family socioeconomic level, all of which predict later educational attainment, may also be among the determinants of self-esteem. We turn next to an exploration of such additional factors and their links to self-esteem.

Other Factors Linked to Attainment and Self-Esteem. Given the findings outlined above, it seemed important to explore more directly and in greater detail the relationships between self-esteem and a number of variables which our earlier research (Bachman et al., 1971) had shown to be predictors of educational attainment. These factors, some of which were measured at several points in time, include family

socioeconomic level, academic ability, grades, self-concept of school ability, and instances of rebellious and delinquent behavior in school. Their correlations with self-esteem (at all five points in time), as well as their correlations with educational attainment, are presented in Table 5-3. (Also included in Table 5-3 for comparison purposes are three measures of attainment as of 1974: level of education completed, employment versus unemployment, and status of occupation.)

We can begin our examination of Table 5-3 by noting the correlations in the column which is second from right; they indicate that all of the measures included in the table are linked to educational attainment. Many of the relationships, e.g., those involving academic ability (test scores) and classroom grades, are quite substantial.

The more important finding displayed in the table is that each of the dimensions included is correlated with self-esteem. Of particular interest is the fact that in every instance the early measures of self-esteem, usually the 1966 scores, show the strongest correlations, whereas the weakest correlations involve self-esteem as measured in 1974. It is worth noting that the self-concept of school ability measured in 1968 shows the highest correlation with self-esteem measured at the same point in time, and this is also true for the 1968 measure of rebellious behavior in school (but not for the 1968 measure of delinquent behavior in school). We were not surprised to find some heightening of correlations among variables measured in the same data collection; on the contrary, the surprising fact is that this "time matching" phenomenon does not appear more often. Other dimensions measured at multiple points in time, such as college plans (Times 1 through 3) and occupational aspirations (Times 1 through 3) and occupational aspirations (Times 1 through 5), show little or no "time matching" effect; instead, the overwhelming tendency is that plans or aspirations, no matter when they were measured, show the strongest association with tenth grade (1966) self-esteem and progressively weaker relationships with later self-esteem.³

Table 5-3
Self-esteem Correlated with Measures of Attainment and Related Factors

	Self-esteem				Educational Attainment	Status of Occupation
	1966	1968	1969	1970	1974	1974
Socioeconomic level 1966	.16	.11	.12	.12	.07	.20
Number of siblings	-.07	-.09	-.06	-.05	.00	-.19
Ability 1966	.21	.18	.17	.20	.13	.30
Grades: 9th year	.26	.21	.17	.16	.12	.32
Grades: 10th year	.25	.25	.20	.16	.14	.29
Grades: 12th year	.21	.25	.21	.14	.12	.30
Self-concept of school ability '66	.36	.28	.27	.24	.17	.24
Self-concept of school ability '68	.29	.32	.29	.25	.18	.21
Rebellious behavior in school '66	-.36	-.26	-.18	-.20	-.15	-.18
Rebellious behavior in school '68	-.21	-.27	-.19	-.17	-.10	-.15
Delinquent behavior in school '66	-.19	-.10	-.04	-.06	.00	-.14
Delinquent behavior in school '68	-.18	-.14	-.11	-.07	-.06	-.17
Delinquent behavior in school '69	-.15	-.12	-.10	-.08	-.03	-.19
College plans 1966	.22	.13	.12	.10	.10	.23
College plans 1968	.22	.19	.16	.14	.11	.20
College plans 1969	.25	.22	.20	.16	.16	.30

Table 5-3
(continued)

	Self-esteem				Educational Attainment		Status of Occupation
	<u>1966</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1974</u>	<u>1974</u>	<u>1974</u>
Status of aspired occupation '66	.19	.13	.09	.11	.11	.47	.26
Status of aspired occupation '68	.20	.15	.13	.12	.09	.53	.28
Status of aspired occupation '69	.21	.18	.16	.14	.08	.56	.30
Status of aspired occupation '70	.21	.17	.15	.14	.10	.59	.31
Status of aspired occupation '74	.15	.15	.12	.12	.11	.56	.45
Educational attainment 1974	.27	.21	.21	.17	.14	1.00	.41
Status of attained occupation '74	.15	.13	.14	.20	.16	.41	1.00
Employment vs unemployment '74	.03	.00	.05	-.01	.10	.06	.12

Note: Based on a N of 1600 and a design effect of 2.25, an r of .08 is significant at $p < .05$, and an r of .10 is significant at $p < .01$.

Two implications drawn from these findings are particularly relevant for our exploration of the linkage between success and self-esteem. First, it seems clear that those factors which help to determine later educational attainment are also determinants of self-esteem (C causes both A and B). Second, it appears that these educationally-relevant factors make a significant contribution to self-esteem during the early high school years, but this contribution becomes steadily less important as young men progress through high school and continue into other educational and/or occupational environments. These implications are entirely consistent with our earlier findings about self-esteem and educational attainment (Figure 5-1). Taken as a whole, the pattern of results suggests that things having to do with the self-concept of educational success--academic skills, past classroom performance, future aspirations, and the like--undergo some reduction in "centrality" or "salience" for the self-esteem of young men during the late high school years and the period that follows.

We suggested earlier that a reduction in the centrality of academically relevant factors might take place among the young men in our study who did not continue their education beyond high school, whereas among those who did go on to college the centrality of such factors might remain high. The correlations shown in Table 5-3 were recomputed separately for four categories of respondents: (a) those who initially (at the start of tenth grade) planned to go to college and later did, (b) those who planned to go but did not, (c) those who did not initially plan on college but later did attend, and (d) those who neither planned to attend nor did. Contrary to our expectation, there was no indication that the centrality of academic factors dropped more sharply among those who did not go on to college (categories b and d).

Impact of Occupational Experiences

Occupational success is a more complicated concept than

educational success. In this chapter we deal with two aspects of occupational experience: employment versus unemployment, and occupational status (Duncan scale).⁴

Unemployment. Table 5-4 contrasts self-esteem scores for those who were unemployed at the 1974 survey (Time 5) and those who were employed full-time or part-time in the civilian work force (full-time students and those in military service are omitted from the table). The bottom line of the table indicates only small and non-significant differences in self-esteem between the two groups until 1974, at which point the difference reaches about one-third of a standard deviation. Although this difference is not so large as to suggest a devastating impact of unemployment upon self-esteem, the finding does indicate that failure to have a job has some negative effect on self-esteem.

The negative impact of unemployment may be linked to educational level. Those who have followed the socially-approved path of high school graduation and perhaps also college have "done their part," so to speak, and thus may be less inclined to view unemployment as their own fault. High school dropouts, on the other hand, have followed a path which is disapproved; public announcements proclaim that dropping out "doubles the chances of being unemployed," and the unemployed dropout may thus be more likely to blame himself for his predicament. We examined the impact of unemployment (as of 1974) separately for three levels of educational attainment: dropouts without high school diplomas, high school graduates with no further education, and those who entered college (including those who completed associate and bachelor degrees). Among the college entrants, the mean gain in self-esteem scores from 1966 to 1974 is .44 for the employed ($N=659$) and .38 for the unemployed ($N=49$); this difference is small and of little consequence. Among the high school graduates who did not enter college, the mean gain in self-esteem is .58 for the employed ($N=387$) and .50 for the unemployed ($N=39$)--again, a rather small

Table 5-4

Cross-time Self-esteem Scores for Employed and Unemployed

1974 Employment Status	Self-esteem				
	<u>1966</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1974</u>
Employed (<u>N</u> = 1,205) <u>M</u>	3.72	3.82	3.88	3.89	4.23
<u>SD</u>	.51	.47	.49	.48	.47
Unemployed (<u>N</u> = 111) <u>M</u>	3.66	3.81	3.79	3.91	4.05
<u>SD</u>	.56	.55	.52	.53	.58
Difference <u>M</u>	.06	.01	.09	-.02	.18*

* $t = 3.78$, $p < .05$, two-tailed, incorporating design effect

difference. Among high school dropouts, on the other hand, the difference is more substantial; the mean gain in self-esteem is .62 among the employed ($N=83$) but only .31 among the unemployed ($N=18$). While this difference falls short of statistical significance given the small number of unemployed dropouts, it is certainly in a direction consistent with the explanation outlined above.

In sum, we find for the sample as a whole that the dimension of employment-unemployment seems to have an impact on self-esteem measured at the same point in time (1974) but little relationship to earlier measures of self-esteem. Our analysis of educational subgroups produced some differences which, although not statistically significant, suggest that the negative impact of unemployment on self-esteem may be more pronounced among high school dropouts than among those who have completed high school.

Occupational status. Given our initial theorizing about the positive impact of success on self-esteem, our expectation was that those young men who attained higher status jobs would show above average gains in self-esteem; thus we expected that occupational status in 1974 would be positively correlated with self-esteem in 1974, and that the relationship with earlier measures of self-esteem would be weaker. The correlations presented in Table 5-3 show that occupational status in 1974 has basically the same strength of association with self-esteem no matter when self-esteem was measured. (The slightly higher correlation with 1970 self-esteem is not significantly different from the other correlations and may represent nothing more than chance variation.) One of the problems with these zero-order correlations is that a number of the factors which may be among the causes of educational attainment and self-esteem are also related to occupational status. Thus we may be able to get a clearer picture of what occupational success adds to self-esteem if we introduce statistical controls for these other prior influences.

Multivariate Analyses

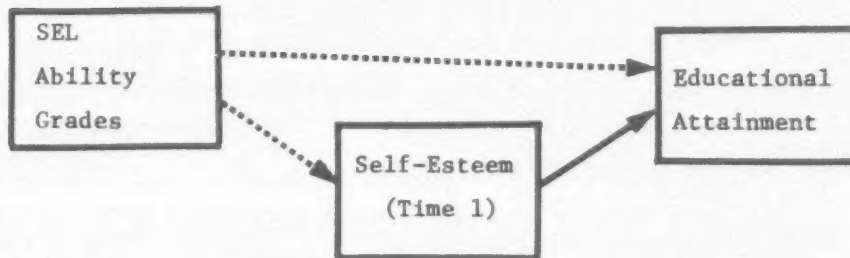
Earlier in this chapter we distinguished among three patterns of causation which might produce a relationship between self-esteem (A) and attainment (B)--A causes B, B causes A, and C (other variables) causes both A and B. We have presented a good deal of data to indicate that relationships do exist among these variables, including a number of those factors (the "C" variables) which may be prior causes of both self-esteem and attainment. Now we will undertake a series of regression analyses designed to distinguish among these alternative causal patterns.

Educational Attainment. Let us begin with the link between tenth grade (Time 1) self-esteem and educational attainment five years beyond high school (Time 5). The product-moment correlation between these two dimensions is a rather substantial .27. Does this mean that early self-esteem is an important cause of later educational attainment (A causes B), or does it mean that some of the factors which contribute heavily to self-esteem in tenth grade are also determinants of later educational success (C causes both A and B)? Of all the dimensions shown in Table 5-3, the first few--family socioeconomic level, academic ability, and ninth-grade classroom grades--seem particularly appropriate to treat as factors which may play a causal role in determining both educational attainment and tenth-grade self-esteem. (The other dimensions in Table 5-3 may also play a causal role; however, their position in a causal sequence is less clearly a prior one.)

Figure 5-4 depicts schematically the relationships between tenth-grade self-esteem, educational attainment, and the other causal variables (SEL, ability and grades). Background, ability and past school performance are all presented as causes of both self-esteem and educational attainment (the dashed arrows show the C causes both A and B pattern); additionally, tenth-grade self-esteem is presented as a cause of educational attainment (the solid arrow shows the A causes B pattern). The analysis question to be considered is this: how strong is the link between self-esteem and

educational attainment when the other factors are also part of the equation? The technique to be used is multiple regression analysis, in which tenth-grade self-esteem is used as a predictor of educational attainment, along with SEL, ability and grades.

Figure 5-4
Causal Relationships between Early Self-Esteem,
Educational Attainment and Other Variables



The results of the multiple regression analysis are contained in Table 5-5. The key relationship is the standardized regression coefficient (beta) between tenth-grade self-esteem and educational attainment, a value of .09.⁵ This suggests that the direct causal connection between self-esteem and later educational attainment (A causes B) is very weak at best. On the other hand, the other regression coefficients and the multiple correlation of .67 fit very well with the "C causes both A and B" interpretation. Thus we conclude that the zero-order correlation of .27 between Time 1 self-esteem and educational attainment occurs largely because they share a common set of prior determinants.

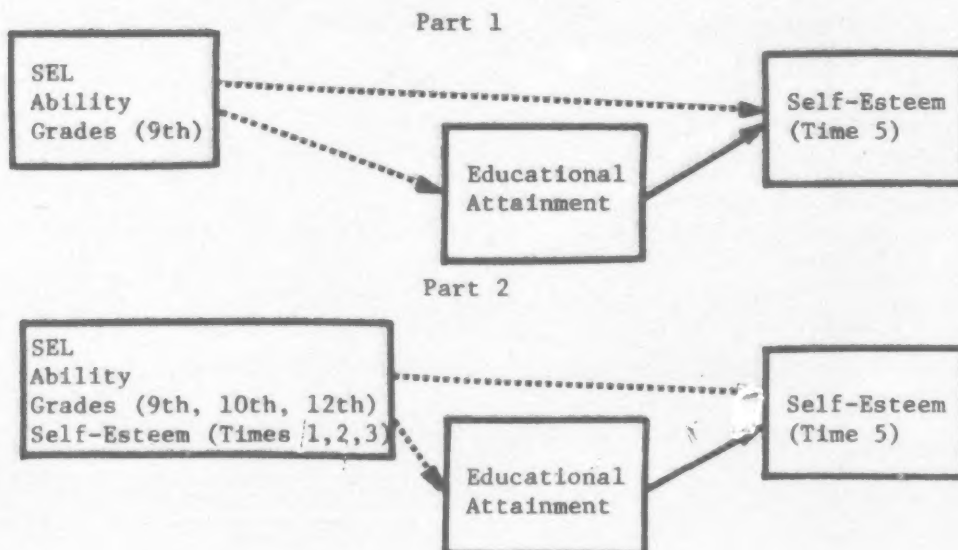
Table 5-5
Multiple Regression Analysis Predicting Educational Attainment

Predictor	Beta	T-Ratio of Beta
Family Socioeconomic Level	.256	12.00
Ability Composite	.233	10.03
Average Grade: 9th year	.334	15.58
Self-esteem at Time 1	.094	4.82
Multiple correlation coefficient	.667	(adjusted = .666)

Now let us turn to an exploration of educational attainment as a possible cause of self-esteem. In this case, of course, we will be examining self-esteem measured at the end of the study (Time 5). The product-moment correlation between educational attainment and Time 5 self-esteem is .14--is that because educational success boosts self-esteem (B causes A), or is it because other factors contribute to both (C causes both A and B)? If we treat as "other factors" the same dimensions of SEL, ability, and grades that we used in the previous analysis, the relationships are as depicted in Part 1 of Figure 5-5.

Figure 5-5

Causal Relationships between Later Self-Esteem,
Educational Attainment and Other Variables



The multiple regression analysis corresponding to Part 1 of Figure 5-5 is presented in Table 5-6, Part 1. The standardized regression coefficient for educational attainment predicting Time 5 self-esteem is .09. This suggests only a weak causal relationship; but perhaps even that relationship is overstated. Since we are dealing with post-high school educational attainment and its impact on self-esteem measured five years after high school, it seems appropriate to include among our prior causal factors the measures of scholastic performance (grades) obtained at several points throughout high school. More important, it seems reasonable to include earlier self-esteem as an important prior cause of later self-esteem; accordingly, we included self-esteem measured at three points during the high school years (Times 1, 2 and 3) among the prior factors which help to determine later (Time 5) self-esteem. The analysis is depicted schematically in Part 2 of Figure 5-5.

The multiple regression analysis corresponding to this expanded treatment of prior causal factors is presented in Part 2 of Table 5-6. Clearly, the most important predictors of self-esteem at Time 5 are the earlier measures of self-esteem, especially self-esteem at Times 2 and 3. The standardized regression coefficient for educational attainment predicting Time 5 self-esteem is reduced to a trivial .025, strongly suggesting that there is virtually no direct causal connection between educational attainment and self-esteem five years beyond high school.

Table 5-6

Multiple Regression Analyses Predicting Time 5 Self-Esteem
from Educational Attainment and Other Variables

Part 1

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	-.020	0.67
Ability Composite	.072	2.27
Average Grade: 9th year	.042	1.39
Educational Attainment	.089	2.70
Multiple correlation coefficient	.159	(adjusted = .152)

Part 2

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	-.023	0.87
Ability Composite	.039	1.37
Average Grade: 9th year	-.008	0.24
Average Grade: 10th year	.018	0.55
Average Grade: 12th year	-.025	0.81
Self-Esteem at Time 1	.052	1.89
Self-Esteem at Time 2	.180	5.85
Self-Esteem at Time 3	.296	10.06
Educational Attainment	.025	0.81
Multiple correlation coefficient	.480	(adjusted = .475)

(Two other regression analyses are worth a passing mention here. One predicted Time 5 self-esteem using only earlier self-esteem--measured at Times 1, 2 and 3--plus educational attainment. The standard regression coefficient for educational attainment was .027--almost identical to the .025 shown in Table 5-6. Some might object that by including Time 3 self-esteem in our regression equations we may have inadvertently included some "anticipatory" effects of educational attainment, since by the end of high school many students were already aware of educational levels they would eventually attain. It may be reassuring to note that in another regression analysis, which added only Time 1 self-esteem to the predictors shown in Part 1 of Table 5-6, the beta coefficient for educational attainment was only .047.)

Unemployment. In the case of the employment-unemployment dimension, we repeated the series of regression analyses outlined above (except that employment was substituted for educational attainment). Since there is no positive correlation between initial (Time 1) self-esteem and employment at the end of the study ($r = .03$), there was no reason to expect that self-esteem would emerge as a cause of later employment or unemployment (A causes B), and the multiple regression analysis revealed no such relationship. On the other hand, there is a modest correlation ($r = .10$) between employment and self-esteem at Time 5. (Moreover, that modest correlation represents a self-esteem difference of more than one third of a standard deviation between the employed and unemployed.) So the question can be raised: did being employed (or unemployed) at Time 5 have an effect on self-esteem at that time (B causes A), or were both caused by other factors (C causes both A and B)? Table 5-7 presents the regression analyses necessary to deal with these questions. The standardized regression coefficient for employment predicting to self-esteem (Time 5) is .10 with SEL, ability and early grades included in the equation; the value shrinks only very slightly to .09 when self-esteem and grades throughout high

school are added to the equation. Thus we conclude that the impact of unemployment on self-esteem is almost entirely independent of the other factors we have been examining.

Table 5-7

Multiple Regression Analyses Predicting Time 5 Self-Esteem
from Employment and Other Variables

Part 1

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	.006	0.20
Ability Composite	.091	2.96
Average Grade: 9th year	.072	2.61
Employment (vs. Unemployment)	.098	3.96
Multiple correlation coefficient	.175	(adjusted = .168)

Part 2

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	-.015	0.58
Ability Composite	.042	1.49
Average Grade: 9th year	-.005	0.15
Average Grade: 10th year	.029	0.87
Average Grade: 12th year	-.028	0.92
Self-Esteem at Time 1	.051	1.87
Self-Esteem at Time 2	.184	6.01
Self-Esteem at Time 3	.291	9.94
Employment (vs. Unemployment)	.086	3.87
Multiple correlation coefficient	.480	(adjusted = .476)

Occupational Status. The regression analyses were repeated once more, this time to examine the relationship between self-esteem and occupational status. The zero-order correlation between tenth-grade (Time 1) self-esteem and occupational status five years after

high school (Time 5) is .15. This suggests the possibility early self-esteem might have a modest impact upon later job attainment (A causes B); however, when we include other factors in the regression equation the results fit better with the view that factors of background and ability have an influence on both (C causes A and B). Table 5-8 presents that analysis, showing a standardized regression coefficient of only .05 for initial self-esteem predicting to later occupational attainment.

Table 5-8
Multiple Regression Analysis Predicting Occupational Status

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	.060	2.24
Ability Composite	.167	5.77
Average Grade: 9th year	.212	7.94
Self-Esteem at Time 1	.053	2.17
Multiple correlation coefficient	.372	(adjusted = .369)

When we consider the possibility that occupational status may have an impact on self-esteem (at Time 5), we have another modest zero-order correlation--a value of .16. The regression analysis in Table 5-9 shows that this relationship is moderately changed by controlling other factors; with controls for background, ability, grades and self-esteem throughout high school the standardized regression coefficient is .09. This suggests that the zero-order correlation reflects both patterns of causation--occupational status has a small direct impact on self-esteem (B causes A) but other factors have an impact on both and thus contribute to the relationship (C causes both A and B).

Table 5-9

Multiple Regression Analyses Predicting Time 5 Self-Esteem
from Occupational Status and Other Variables

Part 1

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	-.004	0.14
Ability Composite	.073	2.36
Average Grade: 9th year	.047	1.65
Occupational Status	.119	4.51
Multiple correlation coefficient	.182	(adjusted = .176)

Part 2

<u>Predictor</u>	<u>Beta</u>	<u>T-Ratio of Beta</u>
Family Socioeconomic Level	-.022	0.86
Ability Composite	.031	1.11
Average Grade: 9th year	-.015	0.47
Average Grade: 10th year	.017	0.51
Average Grade: 12th year	-.030	0.99
Self-Esteem at Time 1	.051	1.87
Self-Esteem at Time 2	.181	5.91
Self-Esteem at Time 3	.293	9.99
Occupational Status	.089	3.73
Multiple correlation coefficient	.480	(adjusted = .475)

Discussion of Findings and Implications

We stated at the outset of this chapter that self-esteem is likely to be linked to educational and occupational attainment--probably through a number of complexly interrelated patterns of causation. That general expectation has certainly been confirmed by our analyses, although some of our specific expectations about causal connections have not.

Change and Stability in Self-Esteem. Our findings suggest that self-esteem is not a characteristic of personality that is firmly fixed by the time a young man enters high school. On the contrary, we found a gradual but quite substantial rise in average self-esteem throughout high school and particularly during the five years following high school. Our analysis was not designed to uncover the probable cause of this rise. However, it does seem reasonable to rule out the notion that leaving high school produces a sudden and marked shift in self-evaluation; mean self-esteem scores did not show a greater than usual increase during the first year following high school, and stability estimates are virtually identical for the one-year periods that preceded and followed graduation. Perhaps the gradual rise in self-esteem scores among young men during this period simply reflects their increasing maturity and the resulting increase in status, opportunities, and privileges.

Although we found a substantial amount of change in self-esteem over time, we also found a good deal of stability in scores from one year to another. We estimate that, among young men in their late teens and early twenties, self-esteem (after adjustments for measurement unreliability) has a stability of nearly .9 for one-year intervals. Over longer periods the stability is proportionately lower, so that for the total eight-year span of the study we estimate the stability of self-esteem to be .4. These findings concerning stability, coupled with the fact that the overall rise

in scores was quite gradual, provide some support for the view of self-esteem as a relatively enduring characteristic rather than something which shifts abruptly from one situation to another. Change certainly does occur during and following late adolescence, but the change seems to be gradual and developmental rather than revolutionary.

The Changing Link with Education. We found self-esteem linked with educational attainment; however, the linkage is complex and shows evidence of change over time. Those young men in our sample who eventually completed college and entered graduate training showed the highest mean self-esteem; those who never attained the high school diploma had the lowest mean self-esteem, and the groups between these two extremes had mean self-esteem scores which neatly matched their level of educational attainment. The finding that self-esteem is positively related to educational attainment is not surprising. But the relationship is not strongest and clearest at the end of the study, when individuals had sorted themselves into the several levels of educational attainment; instead, the differences are strongest among self-esteem scores obtained at the beginning of the study, apparently "anticipating" educational attainment. And that is surprising.

The multivariate analyses indicate rather clearly that the primary basis for the correlation between high school self-esteem scores and later educational attainment is the fact that those aspects of family background, academic ability, and past school performance which predict later educational success also play an important part in the self-esteem of young men in tenth grade (C causes both A and B). In addition, it appears that factors of background, ability, and past school performance become less and less important for self-esteem as a young man continues through high school and beyond (Table 5-3). This pattern of declining importance for self-esteem appears with great consistency across

quite a number of dimensions--family socioeconomic level, test scores, grade-point averages, rebellious and delinquent behaviors in school, and educational and occupational aspirations. (The very uniformity of this pattern might suggest that the later self-esteem scores are simply less "predictable," no matter what variables we attempt to correlate with them; however, our other findings showing the impact of unemployment and occupational status on later self-esteem rule out such an explanation.)

These declining correlations with self-esteem can be interpreted in terms of shifting centrality; those attributes of self-identity which have to do with conventional educational success have less centrality, and thus less impact on self-esteem, as young men move through the final years of high school and go on to other experiences. This decreasing centrality of the factors linked to academic success is not limited to those who end their education with high school; it holds true also for those who enter college. In this connection it is worth noting a finding from one of our earlier analyses; the value placed on striving for academic achievement--studying hard to get good grades and academic honors--showed a decline throughout the high school years, and that decline was steepest among those who later went on to college (Bachman, Green, & Wirtanen, 1971, pp. 118-120). We conclude that, at least among young men who completed high school in the late 1960's, educational success became a less vital part of the self; and this was particularly true among those who were most successful, the ones who went on to college. We discuss later the question of whether these conclusions about the shifting centrality of educational factors can be generalized to other time periods, and to young women as well as well as young men.

The Impact of Occupational Attainment. One dimension of occupational success is status or prestige. Our findings, like the findings of many other researchers, show a substantial correlation

between educational attainment and job status. The analyses in earlier chapters have shown that the same dimensions of family background, ability and aspirations which predict educational attainment also predict job status. Thus we would expect to find at least some association between occupational status and self-esteem simply because self-esteem--especially during the early high school years--is linked to family background, ability, and aspirations. The more important question is whether the job status that a young man attains in his early twenties makes any additional contribution to his self-esteem.

Our multivariate analyses indicate that job status does indeed make a unique, though very modest, contribution to self-esteem. After controls for background and ability, and even after controls for earlier measures of self-esteem, the status of a young man's job makes some marginal contribution to his present level of self-esteem.

Another and perhaps more basic dimension of occupational attainment, particularly during a time of high unemployment, is simply having a job. We stated earlier that employment versus unemployment provided the clearest instance in our data of a contemporaneous environmental factor--the "unemployment environment"--having an impact on self-esteem. Those young men in the study who were unemployed at the time of the last data collection showed lower than average self-esteem scores. Moreover, the findings suggest that the impact of unemployment upon self-esteem may be felt most heavily by those who fail to attain a high school diploma. Perhaps these young men are most inclined to blame themselves for their unemployment, since their lack of a diploma is something which many sources constantly remind them that they could--and should--take steps to correct. (For a discussion of the "anti-dropout" campaign in the media, see Bachman et al., 1971, and Bachman, 1972.)

In sum, we conclude that occupational attainment, reflected in simply having a job, and also in the status of that job, has an impact on the self-esteem of young men in their early twenties.

Some Limitations

The ability to generalize from any single study, no matter how extensive, is always limited. Some limitations to the present work have already been mentioned; others are obvious. Most notably, our sample was limited to young men, and thus we cannot be sure that the same relationship between self-esteem and educational and occupational attainment would be found for young women. Douvan and Gold (1967), in their review of the literature on adolescent self-esteem, concluded that the self-esteem of boys and girls depends to some extent on different components, and that boys are more likely than girls to establish a sense of esteem "... by asserting competence to achieve in any one of a number of competitive fields (athletics, a career-line, intellectual activity, leadership in school affairs, responsibility in a job)" (p. 250). Our own guess--and at present it can be little more than that--is that some such differences between boys and girls did exist at the start of our longitudinal study in 1966, that they probably still exist to at least some degree, but that the differences are likely to diminish as views about women's and men's roles continue to change.

Another limitation to our sample and the present analysis is that we have not looked separately at racial subgroups, particularly blacks. Rosenberg and Simmons (1971) have recently discussed racial differences in self-esteem at some length, and our own earlier analyses included a brief examination of self-esteem scores for three different sets of black respondents (distinguished by geographical region and school segregation/integration). Our sample was not designed to support accurate generalizations about blacks, so our early analyses were tentative and carefully qualified.

Perhaps our most important conclusion concerning racial differences in self-esteem and many other dimensions treated in the study was that it seemed unwise to treat blacks as a single analysis group (Bachman, 1970, pp. 197-201). The present chapter has made no racial distinctions, partly because preliminary analyses indicated that controlling race would have made virtually no difference for the sample as a whole, and partly because we continue to feel that our sample is not adequate for separate racial analyses--particularly analyses as complex as those presented here.

We noted that views about sex roles seem to be undergoing considerable change, and thus we would be very cautious about using data collected in the nineteen-sixties or earlier as a basis for generalizing about sex differences in the seventies or eighties. But this is simply one example of a very broad problem. Cronbach (1975) argues convincingly that social science data--especially correlational data gathered in real-life situations--are subject to many interactions and extraneous factors, at least some of which are likely to change over time. His summary appraisal bears quoting here:

Generalizations decay. At one time a conclusion describes the existing situation well, at a later time it accounts for rather little variance, and ultimately it is valid only as history. The half-life of an empirical proposition may be great or small. The more open a system, the shorter the half-life of relations within it are likely to be. (Cronbach, 1975, pp. 122-123)

Those aspects of the social system we have been dealing with here--the links between attainment and self-esteem in young men--may have been especially open to change during recent years. During the period in which the young men in our sample were making the transition from adolescence (age 15) to young adulthood (age 23), they and the rest of society were also making the transition

from the mid-sixties (1966) to the mid-seventies (1974). This was a turbulent interval involving substantial changes in the job market and increasingly critical discussion about the value of education. Thus the relationships we have been studying and trying to isolate may have been changing all the while--perhaps at a rate rapid enough to lead us to faulty conclusions.

The problems posed by social change--secular trends--are particularly troublesome for the longitudinal study which follows a single cohort for some period of time. As several authors have pointed out (Buss, 1973; Schaie, 1965), the data from such a study do not permit us to distinguish with certainty between genuine developmental or maturational trends and those changes which affect society as a whole.

Given the limitation outlined above, there are at least two quite different ways of interpreting our finding that educational success and its correlates became much less central to the self-esteem of the young men in our sample as they moved through high school and beyond. The first interpretation, and the one which we have emphasized, is that this shift in centrality is a fairly typical part of the developmental sequence followed by young people in this society. During the late high school years and the period which follows, the young person in the process of becoming an adult increasingly anticipates and experiences situations in which self-evaluation depends on factors quite different from academic success, and this results in a reduced emphasis on the academic side of things. An alternative interpretation of our findings is that they reflect a particular secular trend or cultural change during the late sixties and early seventies--a general decline in the importance or value that society places upon education and educational success. Trust in government declined dramatically during this period, and it may be that faith in education as the pathway to success has also suffered a setback. The developmental

and secular trend interpretations are not, of course, mutually exclusive; both may have played a part in shaping our findings. A clear estimate of the relative importance of each requires additional data from more than one cohort. For the present, the longitudinal analyses presented here demonstrate that self-esteem is significantly linked to educational and occupational attainment, and that the linkage is subject to change over the course of time.

Footnotes

¹The next chapter presents relationships between self-esteem and several other post-high school experiences.

²The eta statistic is not restricted to linear relationships, whereas the product-moment correlation is; therefore, when the two statistics are nearly identical, as is true for the values presented in Figure 5-1, it indicates that the relationship is linear.

³Several of the measures included in Table 5-3 represent aspects of the self-concept. The clearest example is self-concept of school ability; but it could be argued that college and occupational aspirations, and even self-reports of grades and misbehaviors in school, are also parts of an individual's self-concept. As such, these dimensions may be viewed as different components or facets of global self-esteem, rather than as separate and logically prior causes. (This might help to account for some of the "time matching" noted above; another possible explanation is correlated measurement error.) In any event, the general pattern of gradually lower correlations with later measures of self-esteem holds for these measures as well as the other ones in Table 5-3.

⁴We also examined hourly wage rates, but found them essentially uncorrelated with self-esteem measures at any point in time. This finding is consistent with other analyses of wage rate data in this study which show very few relationships.

⁵The t-ratio (unsigned) of beta, included in Table 5-5, is equal to beta divided by its standard deviation. Under an assumption of simple random sampling (and the other usual assumptions), a t-ratio of 1.96 would indicate that the null hypothesis--population beta equals zero--may be rejected with probability of error less than .05. Since our sample is not random, the actual t-ratio required for the .05 level of significance is somewhat higher.

CHAPTER 6

CHANGE, STABILITY, AND THE IMPACTS OF SOCIAL EXPERIENCES

In this chapter we spell out briefly our rationale and procedures for analyzing changes in a variety of dimensions--motives, affective states, values, attitudes, aspirations, and behaviors. In some respects it would have been most logical to place this chapter ahead of our lengthy treatment of self-esteem; however, we felt it would be difficult to discuss issues of longitudinal analysis in the abstract. Our presentation of self-esteem findings seemed a much better place for introducing some of these complexities of analysis and interpretation.

The chapter on self-esteem focused upon only one outcome dimension and linked it to only two major areas of social experience--educational and occupational attainment. While educational and occupational attainment receive greatest attention in this volume, they are not the only dimensions of social experience we wish to consider. And although self-esteem is of particular interest to us, there are many other outcome dimensions to be covered in this analysis. The broad scope of measurement in this project has yielded more than a hundred combinations of experience and outcome dimensions--and most of the outcome dimensions have been measured at four or five points in time. Clearly, we will not be able to maintain the level of detailed analysis that we applied in our study of self-esteem. On the contrary, from this point onward we will have to be much more selective. We recognize, however, that our own priorities for coverage will not always match those of our readers. We have tried to resolve this dilemma, at least in part, by providing sufficient data in appendices to allow the reader to

examine the evidence more extensively than we may be able to do in the text. We will say more about this approach a bit later.

Social Environments and Experiences

What environments and experiences during the late teens and early twenties will we be exploring? Those having to do with education are especially important. A considerable body of research suggests that different amounts of education lead to different outcomes--not simply occupational attainment but also changes in values and attitudes (Feldman & Newcomb, 1969; Withey, 1971). While we found no evidence that educational attainment produced gains on the dimension of self-esteem, it may be that differences in educational experience are related to changes along other outcome dimensions. Moreover, the sheer quantity of education may not be all that matters; it may be that qualitative aspects of post-high school educational experience are more important. Accordingly, the remainder of our analyses of educational impact will include two qualitative dimensions: one is a measure of the character and quality of the college or university attended, the other is the individual's major area of study--business, social science, mathematics, etc. Another very important set of experiences involves an individual's occupation. The occupational dimensions to be treated include the two most important ones from earlier chapters: unemployment and job status (Duncan scale). We have seen that these aspects of the work role have some impact on self-esteem. In subsequent chapters we will consider whether they show effects on other outcome variables, including values, attitudes, and behaviors.

An additional dimension of experience which is partly occupational, but which includes a good deal more, is military service. We will be interested in whether service in the armed forces is linked to any differences, and any differential changes along outcome dimensions.

Two other experiences to be examined more briefly are marriage and parenthood. As we shall see, marriage and parenthood are related to several of our outcome dimensions, but we will have a particularly difficult time in working out the direction(s) of causation that underlie these relationships.

We have mentioned a number of factors which can loom large in the lives of young men in their late teens and early twenties-- further education, employment, military service, marriage and parenthood. We have referred to them as representing "experiences" and sometimes also as "environments." When we designed and first wrote about the Youth in Transition project, we considered it to be "...an exploration of the effects of social environments..." (Bachman et al., 1967, p. v). This continues to be an apt description of our purposes, except that we have some degree of difficulty in using the term "social environment." Certainly someone's present job represents a social environment--one which for most people is of great importance. But what can we say about a high school dropout who served three years in the Army and is presently unemployed? Perhaps we can refer to his unemployment as a kind of social environment--although it is much less precise than when we refer to a job as a social environment. But in what sense does his military service which ended two or three years ago constitute a part of the present social environment? And how does his having dropped out of high school represent a social environment, present or past? These questions are not easily answered. Of course, the individual carries around with him the memories of such experiences, perhaps some scars or some positive changes, and whatever credentials they have added to his record. All of them have become part of what Kurt Lewin called the "life space." But we find it cumbersome and potentially misleading to refer to all of these things as social environments. Accordingly, we prefer to speak of a variety of "experiences" which may have occurred following high school. This deliberately general term can cover contemporary social environments

such as the present job, past social environments such as a term of military service or several years of college, and other aspects of life such as marriage and parenthood which involve ongoing role responsibilities. What these various things have in common is their potential for having an impact--for making a difference--in the lives of young men.

Analysis Strategy

We stated earlier that we found it necessary to be selective in our analyses. We chose to rely heavily upon the product-moment correlation, the measure of linear association between a pair of variables. Appendix G reproduces a massive correlation matrix containing 199 variables (and a total of 19,701 correlations!). The first variables in the matrix are measures of the social experiences that we have just been discussing--educational attainment, occupational outcomes, military experience, marital and parental status. The next variables in the matrix are a number of background dimensions, and these are followed by measures of intellectual ability. The bulk of the remaining variables which appear in the matrix we have called outcome dimensions--motives, values, attitudes, behaviors, etc., which have been measured at a number of different points in time in order to permit an analysis of change. The matrix thus presents interrelationships among virtually all of the variables that are treated in this volume.

In relying heavily on the matrix of product-moment correlations we are, of course, concentrating on essentially linear relationships. When the association between two variables departs from a straight-line pattern, the degree of relationship will be underestimated--perhaps completely overlooked--when one uses only the product-moment correlation measure. We do not consider this to be a serious problem in the present analysis. From a conceptual standpoint, most of the relationships treated here are expected to be fairly linear. We have examined many of the relationships between outcome dimensions

and social experience (predictor) dimensions using one-way analysis of variance, a procedure which does not require linearity. We have already reported that the relationships with self-esteem are essentially linear (see the preceding chapter), and the same holds true for the other dimensions. We found little in the way of departures from linearity, and in most cases those which did appear were rather small and not readily interpreted.

The advantages of product-moment correlations for an investigation involving a great many variables are simplicity, parsimony, and economy. The product-moment correlation presents in a single statistic a measure of the strength and direction of a relationship. By requiring the relationship to be linear, it discounts the sorts of "bumpy" or uneven patterns of association which sometimes appear in one-way analyses of variance. A matrix of product-moment correlations also permits all sorts of multiple regression analyses, as illustrated in the preceding chapter on self-esteem. Finally, the product-moment correlation is the only measure of association which could, at a reasonable cost, be computed for nearly twenty thousand pair-wise combinations of measures and then reproduced in an appendix.

Now let us outline the several kinds of substantive questions we will be exploring, and the ways in which the data in Appendix G can be used to answer these questions. We will use the self-esteem data to illustrate four different types of analyses: (1) a comparison of mean scores at different time points; (2) an examination of reliability and stability across time; (3) an examination of correlations between post-high school experiences and outcomes; and (4) multivariate analyses.

1. Overall Shifts in Outcome Scores. The least complicated, and in some respects the most interesting, conclusion drawn from our analysis in the preceding chapter is that young men in general showed substantial increases in self-esteem as they went from age 15 to age 23. Such a shift is not reflected in product-moment correlations

but rather in mean scores for the several points in time. The first portion of Appendix G contains the means and standard deviations for all variables which appear in the large correlation matrix. The mean scores for self-esteem rise from 3.74 at Time 1 to 4.22 at Time 5, for an overall increase of 0.48 or about one full standard deviation.¹ For each of the other outcome dimensions we examine, one of the questions we will ask is whether there appears to be any substantial overall shift in mean scores, for this represents one important type of change in the young men we are studying.

2. Stability in Relative Ordering of Scores. A different perspective on change involves asking whether those individuals who score highest on a dimension at one point in time are also among the highest scorers at other points in time. In the case of self-esteem, for example, although we found a large increase in mean scores from Time 1 through Time 5, we also found a good deal of stability in the way respondents' scores were ordered from one year to the next. Indeed, we estimated that stability in self-esteem is almost .9 per year--which means that "true" self-esteem scores for one year would be correlated .9 with "true" scores a year later.

Actually, the stability of self-esteem scores appears to increase slightly during the high school years and the period which follows. A more detailed examination of the estimates in the preceding chapter (Table 5-2) indicates that the stability of self-esteem is .74 for the eighteen month interval from Time 1 to Time 2, which reflects an annual stability rate of about .82; stability is .88 for the one-year interval from Times 2 and 3 and .89 for the one-year interval from Times 3 to 4; stability is .69 for the four-year interval from Time 4 to Time 5, reflecting an annual stability rate of .91 (because .91 raised to the fourth power = .69). In sum, our best estimate is that the annual stability rates for self-esteem rise from .81 during most of tenth and eleventh grades, to .88 during the senior year, to .89 during the next year, to .91 during the following four years.

It is important to keep in mind that the stability coefficients presented here are estimates of "true" cross-time correlations after correcting for unreliability in the measures (Heise, 1969). Thus they will always be higher than the raw or unadjusted cross-time correlations which appear in the large matrix in the appendix. In the case of measures with relatively low reliability, the difference between the raw cross-time correlations and the stability estimates will be quite substantial.

We have found it useful to compute reliability and stability estimates for all of our outcome dimensions which have been measured at three or more points in time. As we present our findings for each dimension, we will use the cross-time stability estimates to provide another way of thinking about change.

3. Outcome Scores Linked to Experiences. The most important purpose of our analysis is to explore the relationships between social experiences and outcome dimensions. Each of the social experience dimensions described earlier, except for college major, has been included in the correlation matrix in Appendix G. Thus we can readily examine whether there is any link between a given experience and the outcome dimension measured at the end of study. (For those variables not measured at all five data collections, this span will obviously be a bit more limited; but in all cases to be treated here the longitudinal span covers about four years or more.)

Once again, let us use self-esteem to illustrate the analysis approach that we will be following with the other outcome dimensions. We will include a brief review of the linkages with educational and occupational experiences treated in the preceding chapter, but concentrate more attention on other dimensions of experience and their links to self-esteem.

The product-moment correlations between educational attainment and self-esteem show quite clearly the declining importance of education for self-esteem; Time 1 self-esteem correlates .27 with

educational attainment whereas Time 5 self-esteem shows a correlation of only .14. An alternative measure of educational attainment--number of years of schooling--shows a virtually identical decline, from .25 to .14. (The measure of number of years of schooling has been included in our analyses because this is a commonly used dimension in other studies, and also because some may consider it more appropriate for product-moment correlational analyses. Since it correlates .89 with our eight-category measure of educational attainment, it is clear that the two measures will show highly similar relationships with other measures. When differences appear, the educational attainment variable generally shows a very slightly stronger relationship than the years of schooling variable.)

For those who attended college or a university, the measures of institutional quality show a pattern of relationship to the self-esteem measures that fits in nicely with our other findings. The college status ranking correlates .15 with the Time 1 self-esteem measure, but that relationship shrinks to .03 for Time 5 self-esteem. Another college quality indicator, the college mean score on the ACT test, shows a similar decline--the correlation with self-esteem is .12 for the Time 1 measure but .02 for the Time 5 measure. In other words, among those who wound up going to college (all others have missing data for this part of the analysis), those who went to higher status schools had relatively high self-esteem at the start of the study, but by the end of the study their self-esteem scores were no higher than those who went to less prestigious schools. Many respondents, of course, were able to anticipate during their high school years that they would be going to high status institutions, and this anticipation might have contributed to their above-average self-esteem scores during the high school years--that period when factors related to educational success seem to be especially important for self-esteem.

Incidentally, a comparison of students with different college majors showed no meaningful differences in self-esteem when measured

at Time 5 or during high school. Later, when we explore some dimensions of social values or political views, we will see that college major is associated with important differences.

Turning now to an examination of occupational experience, we find that the correlation between status of attained occupation and self-esteem is .16 at Time 5, but occupational status at Time 5 also correlates .15 with self-esteem measured back at Time 1--the start of tenth grade. Our extensive analysis in the preceding chapter led us to conclude that this apparent stability in relationship is better interpreted as showing a slight impact of occupational attainment on later self-esteem scores; however, that interpretation became plausible only after we undertook multivariate analyses making adjustments for other prior factors influencing self-esteem. We mention this here as a reminder that in a world of multiple and complexly interrelated causal factors, the examination of only two dimensions, even if one is measured at multiple points in time, has the potential for misleading us. (We will say more about our use of multivariate analyses in the next section.)

The other measure of work experience, employment (at Time 5), shows correlations of .10 with Time 5 self-esteem but .03 with Time 1 self-esteem. This pattern of differences in correlations shows the influence of an experience variable (unemployment) on an outcome dimension (self-esteem at Time 5) which was not anticipated in the earlier measures of the outcome dimension. (Recall that the employment dimension is a dichotomy, with 91.5 percent of the respondents in the labor force indicating that they were employed. Thus, when only 8.5 percent are in the unemployed category, a correlation as small as .10 represents a self-esteem difference of about .4 standard deviation units--an effect that is substantively, as well as statistically, significant.)

When we examine the relationship between military service and self-esteem, we find the pattern of declining correlations that we have seen for a number of other dimensions. At the start of the

study, the 25 percent of the sample who would later serve on active duty in the military had slightly lower than average self-esteem scores--the correlation between Time 1 self-esteem and later military service is $-.14$. But self-esteem at the end of the study shows a correlation of $.00$ with military service. On first glance, this seems to indicate that the military services were taking young men with lower than average self-esteem and bringing them up to average, consistent with the slogan that "the Army builds men." But a more detailed examination of the trend in correlations rules out such a simple explanation. The decline in relationship between self-esteem and military service is gradual, and begins during the high school years. The $-.14$ association at Time 1 decreases to $-.09$ and $-.06$ when we correlate Time 2 and Time 3 self-esteem with later military service; and by Time 4 (one year after most graduated from high school) self-esteem scores show the same $.00$ correlation with military service as is true for Time 5. Of course, a few of the young men in our sample dropped out of high school and had entered military service by Time 3, but that number is quite small and could not account for a decrease in association from $-.14$ to $-.06$.

The shifting linkage between self-esteem and later military service may better be explained in terms of the notions introduced in the preceding chapter, especially the idea that things having to do with educational success and failure become less central to the self-esteem of young men as they move toward the end of high school and beyond. Those who wound up serving in the armed forces were not only slightly below average academically. They were a bit below average in ability ($r = -.14$) and past scholastic grades ($r = -.21$), they were less likely to be planning for college ($r = -.20$ for college plans at Time 1, $r = -.28$ for Time 3 plans), and more of them had been held back a grade in school ($r = -.28$). Thus, in those areas of academic success and aspiration which we found to be important for early self-esteem, those respondents who would later enter the military were a shade below the mean. It

may be that during the high school years many of these young men reached the decision to enter military service (Johnston and Bachman, 1972), and this may have hastened the decline in the importance of academic success as a factor influencing their self-esteem. There may be still other factors which we have not investigated which also would help to account for the pattern of correlations between self-esteem and military service. In any event, it seems clear that we cannot credit the military experience per se as the cause of a relative increase in self-esteem, since the shift took place almost entirely before the young men actually entered the service.

The one other set of experiences that we will be examining from time to time consists of marriage and parenthood. About one quarter of the young men in our sample were, at Time 5, married with one or more children; another quarter were married with no children; and the other half were unmarried. Our correlational analysis uses three dichotomous variables to capture the several kinds of relationships which might be involved. One variable simply distinguishes between those who are and are not married. Another distinguishes between parents and all others (married or not). And (for the sake of completeness) a third variable distinguishes married non-parents from all others. Although these variables show no strong relationship with self-esteem, it may be worth noting that those who married and became fathers (within five years after leaving high school) had slightly lower than average self-esteem at the start of the study ($r = -.11$ between self-esteem at Time 1 and parenthood reported at Time 5) but were average in self-esteem at the end of the study ($r = .03$ between parenthood and Time 5 self-esteem). This shift in relationship with self-esteem, like the one for those who entered military service, took place largely during high school (the correlations with self-esteem from Times 1 through 5 are, in order, $-.11$, $-.04$, $-.01$, $-.02$, $.03$): Since the biggest shift in self-esteem correlations took place from Time 1 to Time 2, and since parenthood in virtually all instances took place after Time 2, it seems clear

that we cannot say that parenthood directly influenced self-esteem. On the other hand, if we note that those who became parents by Time 5 were below average in academic ability ($r = -.22$), past grades in school ($r = -.19$), and the other measures of academic experience and aspirations that are linked to early self-esteem, then it seems likely that we are dealing with another reflection of the declining centrality of academic success and skill as factors in self-esteem. In sum, we find that those who became fathers within five years after high school tend to be somewhat below average in academic ability and performance, and slightly below average in self-esteem at the start of the study. However, we find no evidence of any direct effect of marriage or parenthood on self-esteem.

In this section we have gone into a considerable amount of detail in order to demonstrate how the large matrix of correlations in Appendix G can be used to show some of the linkages between post-high school experiences and our outcome scores. As we discuss most other outcomes, we will devote little or no attention to relationships as small and marginal as those linking self-esteem with military experience or parenthood. The reader who is interested in any relationship which has been omitted from our discussion can simply turn to the appendix to examine the data.

4. Outcome Scores Linked to Background and Ability--The Need for Multivariate Analyses. The previous chapter on self-esteem demonstrated rather clearly, we hope, the need to consider a number of other variables before drawing conclusions about the impact of educational, occupational, and other experiences in the years following high school.

Given that background and ability factors are strongly associated with our most important dimensions of post-high school experience-- educational and occupational attainment--and given that they are moderately associated with some of the other dimensions of experience (as we noted in the preceding section of this chapter), it must be an important part of our examination of any outcome dimension to see whether it is related to the background and ability dimensions, and whether the pattern of such relationships changes over time. When such relationships do appear, as in the case of self-esteem, then it may be necessary to undertake multivariate analyses in order to discover more about the nature of possible causal interconnections. On the other hand, for those outcome dimensions which do not show an association with background and ability, there will be less need for multivariate analyses.

The multivariate analyses presented in the chapter on self-esteem are fairly straightforward regression analyses using the correlations found in Appendix G. They provide a model for us to follow in dealing with some of the other outcome dimensions. They can also serve as a model, or at least a starting point, for anyone interested in pursuing the investigation of a particular outcome dimension further than we have been able to do in this report.

Summary of Analysis Strategy. Most of this chapter has been devoted to an outline and illustration of the analysis approach to be followed in subsequent chapters. Because there are so many measures to cover, we rely heavily on a large matrix of product-moment correlations, plus means and standard deviations, reproduced in Appendix G. Given this mass of data, we have outlined a number of steps which we will follow:

1. A comparison of mean scores on the outcome measures at different points in time, thus providing an indication of overall shifts.

2. An examination of reliability and stability estimates, since the latter provide another perspective on change.

3. An examination of correlations between post-high school experiences and the outcome at each point in time for which data are available, since this indicates whether any relationship exists and may suggest whether the post-high school experiences play a causal role.

4. An exploration of whether background and ability dimensions are correlated with the outcome (again, at all available time points), since this may indicate that these other variables may account for relationships between the outcome dimension and any of the post-high school experiences. Where such correlations with background and ability exist, further multivariate analyses (regression analyses) may be needed.

We have followed these steps in our analysis of self-esteem, and in our examination of the other outcome dimensions treated in the following chapters. In some instances we report the steps in some detail; in other instances we mention them only passingly or not at all. In our own selective coverage we have not knowingly omitted any relationship that is particularly strong, or that is centrally linked to our major conclusions.

Footnotes

¹The reader who takes a moment to look up the self-esteem scores in Appendix G will find that the mean scores are actually shown as 373.922 for Time 1 and 422.291 for Time 5. In the case of this variable, and a number of others, the decimal place was omitted in computing individual index scores--thus an individual with a self-esteem index score of 3.50 was recorded as having a score of 350. This rather trivial inconsistency shows up only in the appendix listing of mean scores and standard deviations. In the text we have inserted the decimal points. And, of course, the product-moment correlations in the appendix are unaffected by the shift in decimal.

CHAPTER 7

MOTIVES, AFFECTIVE STATES, VALUES, AND ATTITUDES

The outcome dimensions explored in the Youth in Transition project have covered a wide range, and have also shifted somewhat during the course of the project. In this chapter we deal with a variety of different outcomes. We begin with a brief look at several motives, affective states and values dimensions which were measured throughout the first four data collections (from tenth grade to one year after high school). Then we turn to a collection of attitudes about social issues, including some views about government which were measured throughout the project, and also views about several more specific issues measured only during the last four or five years of the project (starting with the senior year or one year after high school).

Motives, Affective States and Values

A number of dimensions were included in the first four Youth in Transition data collections, but then omitted from the final data collection (Time 5) because it was considered necessary to keep that mail questionnaire from becoming too long. The decision not to repeat these measures was influenced partly by their length, but primarily because they had shown relatively little change during the first four years of the project. We have chosen to include a brief summary of findings for these outcome dimensions, even though they extend to only one year beyond high school, because in several respects they show relationships similar to some of our findings for self-esteem and other variables to be reviewed later.

The following seven dimensions will be considered:

Need for self-development
 Need for self-utilization
 Happiness
 Negative affective states
 Somatic symptoms
 Social values
 Internal control

All are described briefly in the Glossary, and more extended descriptions appear in the first three volumes of the Youth in Transition monograph series (Bachman et al., 1967; Bachman, 1970; Bachman et al., 1971).¹

One of the reasons for grouping these variables together is that each is correlated with self-esteem; the range of correlations at Time 1 is from .25 to .57 (absolute values), and the same pattern holds for Times 2, 3 and 4 (see Appendix G). Additionally, the two motive measures--need for self-development and need for self-utilization--are highly correlated at each point in time (r 's above .7). Further, the affective states dimensions are all interrelated--the negative affective states measure correlates about .6 with somatic symptoms and about -.6 with happiness.

Stability and Change. Given their relationships with self-esteem, it is not so surprising to find that each of these dimensions also shows a pattern of cross-time stability that is similar to that for self-esteem. In each case the annual stability rate is lowest during tenth and eleventh grades, higher during the senior year, and still higher during the year following high school. (The stability estimates are presented in Appendix F.) The conclusion we reached in analyzing the stability of self-esteem would seem to apply here as well: these dimensions of personality show a considerable degree of consistency from one point in time to another; the changes which occur during late adolescence appear to be gradual rather than abrupt.

An examination of the mean scores for all of these dimensions (see Appendix G) also shows rather limited change, on the whole. The

need for self-development does not change at all, while the need for self-utilization drops very slightly (less than 20 percent of a standard deviation) during the year after high school (Time 3 to Time 4). Mean scores for happiness, somatic symptoms and the social values measure are virtually unchanged during the four-year span. Negative affective states shows a modest decline (about 25 percent of a standard deviation) in mean scores, occurring gradually from Time 1 through Time 4. The measure of internal control (or personal efficacy, as it is sometimes called) shows a slight increase (about 20 percent of a standard deviation) mostly during the first two years of high school.

Correlations with Educational Attainment. The similarity with self-esteem is again evident when the motives, affective states and values dimensions are correlated with educational attainment. Each of the seven outcome dimensions shows a pattern of declining correlations with educational attainment, as displayed in Table 7-1 (for comparison purposes, the table also includes data for self-esteem).

In particular, the needs for self-development and self-utilization, social values, and internal control show a rather sharp drop in correlations very similar to that shown by self-esteem. These dimensions also show patterns of correlations with family socioeconomic level, academic ability, and classroom grades which are similar to the relationships for self-esteem discussed in Chapter 5. At the start of high school each of these dimensions of personality is linked to things having to do with educational success, but by one year after high school the connections are much weaker.

In sum, it appears that these dimensions of motives, affective states and values, like self-esteem, are to some extent precursors of later educational attainment. It is perhaps unfortunate that we were unable to provide questionnaire space to measure these dimensions at the end of the study; but had we been able to do so, we very likely would have found slight relationships with educational attainment much weaker than the correlations between the initial (Time 1) scores and educational attainment.

Table 7-1

Motives, Affective States and Values Correlated with
Educational Attainment

Product-Moment correlation between
1974 Educational Attainment and
each criterion measured at:

<u>Criteria</u>	Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)
Need for Self-Development	.28	.24	.24	.15
Need for Self-Utilization	.21	.20	.19	.12
Happiness	.13	.09	.08	.04
Negative Affective States	-.17	-.09	-.12	-.09
Somatic Symptoms	-.25	-.22	-.20	-.20
Social Values	.23	.18	.11	.04
Internal Control	.25	.20	.13	.09
Self-Esteem	.27	.21	.21	.17

Views About Government: Interest and Trust

Interest in Government. A single item asking the respondent to rate how much interest he takes in government and current events was asked in all five data collections. Because this dimension is a single item rather than an index made up of several items, its reliability (estimated at .57) is lower than most of our other measures. Its estimated stability, on the other hand, is quite high--particularly from Time 2 through Time 5 (see Appendix F for the estimates).

At Time 5, about half of the respondents reported "a very great interest" or "a lot of interest" in government and current events, while the other half claimed "some interest" or very little interest" or "no interest at all." The mean interest scores rose by about one third of a standard deviation between Times 1 and 4, then dropped again between Times 4 and 5.

An examination of correlations reveals that interest in government is positively linked to academic ability and eventual educational attainment. Table 7-2 presents the relationships across all five points in time.

Note that interest in government measured at Time 5 shows consistently stronger correlations with academic ability and attainment measures than does government interest measured at Time 1. That would be consistent with the explanation that higher education arouses greater interest in government. The one problem with that interpretation is that government interest at Time 2 (the end of eleventh grade) shows correlations almost as strong as those for the Time 5 measure. We are frankly at a loss for a satisfactory explanation for this pattern. It happens that 1968 was a presidential election year; perhaps that forthcoming event aroused the interest of some college-bound students, which would also account for the slight rise in mean interest scores between Time 1 (Fall, 1966) and Time 2 (Spring, 1968). In any event, it appears that interest in government is related to educational attainment and even to the quality of institution attended (as the second

Table 7-2

Interest in Government Correlated with Selected Other Variables

	Product-Moment Correlations with Interest in Government at:				
	Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
Educational Attainment (1974)	.13	.24	.21	.21	.28
College Status Ranking ^a	.16	.17	.14	.14	.16
College Mean ACT Score ^a	.11	.13	.14	.12	.17
Ability Composite (1966)	.09	.22	.15	.20	.24
Average Grade: 9th year	.16	.21	.17	.16	.20
Average Grade: 10th year	.18	.23	.20	.20	.17
Average Grade: 12th year	.14	.22	.24	.21	.20
Socioeconomic Level (1966)	.10	.14	.15	.16	.19
Status of Occupation (1974)	.07	.15	.10	.06	.17

^a The college status ranking and the college mean ACT score measures are available only for the subset which named a college or university they attended after high school. The others (nearly half of the total sample) have missing data and are thus omitted from the correlations involving these two variables.

and third rows of the table indicate); however, much of that relationship is evident by the end of eleventh grade.

To what extent does educational attainment make a separate contribution to interest in government? We explored that question using regression analyses. When the Time 5 measure of interest in government is predicted by educational attainment along with background, ability, and Time 1 through 3 measures of interest in government, the standardized regression coefficient (beta) for educational attainment is .13. If occupational status is included among those predictors, it has a trivial beta value of .04 while the beta value for educational attainment is .12. This value is a good deal lower than the zero-order correlation of .28 between educational attainment and interest in government (at Time 5); nevertheless, it does suggest a slight positive impact of educational attainment. We can describe the relationship by saying that the more able students who are headed toward college are likely to show higher than average government interest during high school, and after college the effect is a bit stronger.

Trust in Government. The most dramatic finding for our measure of trust in government is the drop of more than a full standard deviation from Time 1 (1966) through Time 5 (1974). Similar questions asked of adult cross-sections during the same period have shown an equally large erosion of confidence in government (Miller, 1974; Miller, Brown, and Raine, 1973).

The decline in trust is quite pervasive, showing only small differences between those who went to college and those who did not. At the start of the study, trust in government was slightly greater among those who were headed for higher education (the correlation between trust at Time 1 and later educational attainment is .13), but at the end of the study there were no differences in government trust associated with education ($r = -.03$). Thus the better educated showed a bit larger drop in trust, thereby "catching up" with their age-mates.

There were some differences in government trust at Time 5 which related to major program of study in college. Those who had majored in biological sciences, social sciences, or humanities and arts, showed slightly lower than average trust in government (about 20 percent of a standard deviation lower). Those who majored in the physical sciences or mathematics were about average. Those in engineering were very slightly higher than average in government trust; those with business majors were a bit higher; and those who had majored in education showed the highest levels of trust (over 30 percent of a standard deviation). These differences linked to college program were only partially forecasted by differences at Time 3 (the end of high school); at that time those who were to major in humanities and arts were a bit more critical of government than the average (about 20 percent of a standard deviation), while those headed toward business or education majors were very slightly more trusting than average (about 15 percent of a standard deviation).

One other slight difference in the rate of declining government trust appears when we contrast those who did and did not serve in the armed forces. At the start of the study, those who would later serve had very slightly lower trust ($r = -.05$), but at the end of the study the difference in trust was reversed ($r = .09$). Those who served in the military showed a distinct drop in government trust, but it was not quite as sharp a drop as occurred for their non-military age-mates (see Bachman and Jennings, 1975, for an extended treatment of these and related findings).

Views About Vietnam Policy and Military Influence

Much of the decline in government trust discussed above can be traced to dissatisfaction with U.S. policy in Vietnam (Bachman and Jennings, 1975; Bachman and vanDuinen, 1971; Miller, 1974). In this section we examine a measure of such dissatisfaction--an index which we have termed Vietnam dissent. We also examine a two-item index dealing with preference for military influence; the index is based on

respondents' ratings of military spending, and the influence of military personnel over the way the country is run, using a five-point scale ranging from "far too much" (scored 1) through "about right" (scored 3) to "far too little" (scored 5). (A high score, indicating that there is "too little" military spending and influence, is interpreted as indicating a preference for greater military influence.)

Dissatisfaction with Vietnam policy increased substantially from Time 3 (1969) to Time 5 (1974)-- a shift of about one half of a standard deviation. During the same period, the shift in preference for military influence was much smaller--preference ratings dropped by just over one tenth of a standard deviation. At both time periods most respondents rated military spending and influence as being either "about right" or "too much."

Relationships with Educational Experiences. Those who went to college were, at the end of the study, more critical of Vietnam policy and less supportive of military influence than were those who did not go to college. At the end of high school (Time 3), there were already differences in views about military influence that, in a sense, "anticipated" the effects of higher education; however, the relationships grew substantially stronger during the five years following high school. Table 7-3 shows how educational attainment and a number of other variables are correlated with Vietnam dissent and preference for more military influence at each of the times these two dimensions were measured.

Several observations arise from a comparison among the correlations in Table 7-3:

1. Most of the shift in Vietnam dissent correlations occurred during the first year following high school; the correlations for the Time 4 measure are nearly as high as those for the Time 5 measure, and both are a good deal higher than the correlations for Time 3 Vietnam dissent.

Table 7-3
Views About Vietnam and Military Influence Correlated
with Selected Other Variables

Product-Moment Correlations with:

	Vietnam Dissent			Preference for More Military Influence	
	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)	Time 3 (1969)	Time 5 (1974)
Educational Attainment (1974)	.07	.21	.26	-.19	-.32
College Status Ranking ^a	.08	.18	.20	-.15	-.21
College Mean ACT Score ^a	.12	.24	.23	-.19	-.22
Ability Composite (1966)	.05	.18	.27	-.17	-.34
Socioeconomic Level (1966)	.08	.23	.23	-.17	-.28
Status of Occupation (1974)	.03	.09	.10	-.07	-.13
Military Service (by 1974)	-.13	-.20	-.11	.14	.26

^aCorrelations are based on only those who attended a college or university.

2. At Time 5 the correlations with views about military influence are similar to those for Vietnam dissent (except that the sign of the correlation is reversed in each case); however, in most instances the relationship is a bit stronger for preferences about military influence.

3. At Time 3 (the end of high school) there are larger differences in strength of relationship when we contrast Vietnam dissent with views about influence. The preference for more military influence measured at the end of high school shows some noticeable differences between those who were headed toward college and those who were not.

To the above observations we can add another which is not based upon the table, but which fits in rather nicely with what we have already seen. The correlation between Vietnam dissent and preference for more military influence is $-.41$ at Time 3 and $-.53$ at Time 5. The stronger relationship between the two variables at Time 5 is consistent with the fact that they show more similar (albeit reversed) patterns of correlations with other variables at Time 5.

How shall we interpret these differential shifts in correlation from Time 3 to Time 5? One fairly plausible interpretation is that views about military influence are somewhat more basic or fundamental than dissatisfactions with the war in Vietnam; therefore, the views about influence showed relationships with background, ability, and college orientation earlier and more strongly than did Vietnam dissent--particularly since for many people views about Vietnam underwent substantial change between mid-1969 and mid-1970.

To what extent are the relationships shown at Time 5 merely reflections of earlier differences in background and ability, rather than effects of educational attainment? We explored this question using multiple regression analyses in which educational attainment, along with background, ability, and earlier (Time 3) Vietnam dissent were used to predict later (Time 5) Vietnam dissent. The standardized regression coefficient (beta) for educational attainment is $.12$,

indicating a modest direct contribution to Vietnam dissent. A similar analysis carried out for the preference for more military influence produced similar results--a beta value of $-.13$ for educational attainment.

It is of interest to note that the quality of the college or university attended also seems to bear a relationship to views about Vietnam and the military. Those who went to higher status institutions, and ones with higher mean student test scores, also tended to be more dissenting about Vietnam policy and less favorable toward military influence; the latter effect was just about as strong prior to college entrance (Time 3) as it was five years later (Time 5).

Another dimension of educational experience--major area of study--shows a relationship with military and Vietnam views. At the end of high school, those who would later major in humanities or the arts were above average in their criticism of Vietnam and military influence, whereas those who would major in engineering, business or education were all a bit less critical than the average student headed for college. Five years later (in 1974), the engineering, business and education majors had, like most others, become more critical about Vietnam policy; but they still were not as dissatisfied as the average respondent who went to college. By 1974, those most critical of Vietnam policy were the social science majors, followed by the physical science and mathematics majors, and then by the biological science and humanities and arts majors. The findings for 1974 views about military influence are similar, with one very interesting exception. Those who majored in physical sciences or mathematics showed no mean shift at all in their ratings of military influence--thus, from a position slightly above the mean for those headed toward college in 1969, they moved to a position slightly below the mean in 1974.

We see, then, a considerable contrast between the social science majors and the physical science or mathematics majors. Both groups showed a large (about one standard deviation) increase in Vietnam

dissent; but while the social science majors also showed a larger drop in preference for military influence than any other group (about half a standard deviation), the physical science and math majors showed no drop at all. There is some temptation to speculate about the reasons for these differences between social science majors and those in the physical sciences and mathematics, but since that would carry us rather far afield, we will resist the temptation. It is sufficient to note that here, as well as in the other comparisons noted above, we see some differences in patterns of change which suggest that educational experiences have made an impact on at least one area of values and attitudes.

Relationships with Other Experiences. The bottom row in Table 7-3 shows correlations between military service experience and views about Vietnam and military influence. Those who would later serve in the armed forces were slightly less critical of Vietnam policy in 1969, just before most of them graduated from high school; one year later the difference between those who did and did not serve had grown larger; but four years beyond that (1974) the difference had diminished somewhat. Views about military influence, on the other hand, show differences which remain fairly substantial at the end of the study; those who served in the armed forces preferred more military influence than those who had not ($r = .26$). Although those who served showed some tendency to be more favorable to the military before they actually entered, it appears that their military experience had some further impact on their views about how much military influence is desirable in the United States.²

Another dimension of post-high school experience which shows a small relationship with views about Vietnam and military influence is occupational status in 1974. These correlations, however, are simply weak reflections of the relationships with educational attainment--the better educated also tend to gain the high status jobs, so occupational status to some extent shows the same sort of relationship

as educational attainment. When educational attainment and occupational status are entered together into multiple regression equations, along with background and ability and Time 3 Vietnam dissent, the beta value for occupational status predicting Time 5 Vietnam dissent is a trivial $-.03$. The comparable analysis predicting Time 5 preference for more military influence produces the same result ($\beta = .01$).

Views About Other Social Issues

Population and Family Planning Issues. A series of questions asked in the last two data collections deal with concern about population problems, personal preference for children and views about abortion. During the period from 1970 to 1974, these measures showed relatively little change in mean scores. The index of population concern showed no shift in mean scores at all. The preferred number of children dropped from a mean of 2.81 to a mean of 2.48--a shift of about one quarter of a standard deviation. And responses to this statement, "A woman should be permitted to have an abortion at any time during the first three months of pregnancy," went from a mean of 2.11 to 2.02 on a four-point scale of agreement, with a score of 2 indicating "mostly agree."

As the correlations in Table 7-4 indicate, views about population and abortion show some relationship to educational attainment. They are also related to family socioeconomic level, ability, and measures of college quality. None of these relationships with background, ability, and educational experience shows much change from 1970 (one year after high school) to 1974 (five years after high school). If higher education plays a central role in influencing views in this area, it must have its impact during the first year after high school. A more likely explanation, perhaps, is that some individuals--especially those with higher ability, higher family socioeconomic backgrounds, and greater interests in education--are more likely to be aware of, and express concern about, emerging social issues.

By 1970 the concern about population problems had already reached a broad cross-section of the public; indeed, after 1970 there was probably no overall increase (and perhaps even some decrease) in public awareness of population growth as a danger.

We noted that a number of factors relate to population concern and views about abortion; however, these same factors show little association with the actual number of children a respondent desired. A stronger predictor of preferred number of children is the respondent's own family size--the more brothers and sisters a young man has, the more children of his own he is likely to prefer. Preferred number of children also shows a rather strong relationship with population concern, as one might expect. The greater the concern about population problems, the lower the preferred number of children ($r = -.33$ in 1970, $r = -.42$ in 1974).

One or two other relationships in Table 7-4 bear mention. First, we find a certain consistency in population views linked to the respondents' own number of siblings; in addition to their slightly above average preference for children, those from larger families also show greater than average disapproval of abortion and lower than average concern about population problems. Additionally, the respondents' own parental status shows a slight negative correlation with population concern, and a positive connection with abortion disapproval. (Incidentally, these relationships are a reflection of parenthood, specifically, not marriage in general. Married respondents without children are not at all different along these dimensions from those who are unmarried.)

Racial Attitudes.³ Three scales of racial attitudes were used at Times 3, 4 and 5; one deals with whether the government should take a strong role to insure equal treatment for all races, another deals with social distance between the races, and another deals with perceptions of discrimination against blacks. The items, shown in Table 7-5, were

Table 7-4

Views About Population and Family Planning Issues Correlated with Selected Other Variables

	Population Concern		Ideal Number of Children		Disapproval of Abortion	
	Time 4 (1970)	Time 5 (1974)	Time 4 (1970)	Time 5 (1974)	Time 4 (1970)	Time 5 (1974)
Educational Attainment (1974)	.29	.23	-.05	-.06	-.25	-.21
College Status Ranking ^a	.11	.13	-.05	-.08	-.14	-.14
College Mean ACT Score ^a	.10	.14	-.04	-.06	-.14	-.14
Ability Composite (1966)	.34	.30	-.08	-.15	-.27	-.24
Socioeconomic Level (1966)	.23	.18	-.07	-.07	-.23	-.20
Number of Siblings (1966)	-.24	-.21	.16	.18	.14	.19
Status of Occupation (1974)	.07	.09	-.02	-.01	-.08	-.05
Married and a Parent (by 1974)	-.16	-.10	-.06	.03	.09	.16

^a Correlations are based on only those who attended a college or university.

all adapted from the work of Campbell and Schuman (1968). Although the items were worded in such a way that they could be answered by members of any racial group, we consider it most useful to limit our analysis in this section to white respondents. Thus we will be dealing with the attitudes of young white men toward blacks.

The response distributions for each of the items are presented in Table 7-5, and it will be useful to begin our discussion by considering the changes in responses from 1969 (the end of high school) to 1974. The three questions about government action to end discrimination all show some shift in opinion from 1969 to 1974. By 1974 only eight percent disagree with the statement that the government should insure that blacks and whites are allowed to attend the same schools if they want to, and only three percent disagree with the statement that government should insure equal treatment in jobs. On the other hand, 21 percent agree or agree mostly that "It is not the government's business to pass laws about equal treatment for races." It may be that some of the 21 percent respond that way not because they object to equal treatment, but rather because they object to government action as the means for accomplishing it. Thus the measure of support for government action, while a very relevant dimension, is not an uncontaminated indicator of racial views.

Perhaps a simpler and more direct measure of individual attitudes is the social distance dimension, since it deals with the respondent's own supervisor, neighborhood and children. Here the shifts from 1969 to 1974 are quite substantial; for each item the proportion expressing some racial bias is cut in half. The proportion saying they would not mind at all having a supervisor of a different race increases from 70 percent to 85 percent; those not minding a family of a different race moving next door increase from 62 percent to 75 percent; and those preferring that their children have both black and white friends increase from 81 percent to 91 percent. We do not want to minimize the fact that 9 to 25 percent, depending on the item, still fall short of responses that would indicate

Table 7-5

Racial Attitude Items: Percentage Frequency (Whites Only)

	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
GOVERNMENT SHOULD END DISCRIMINATION			
"The government in Washington should see to it that white and black children are allowed to go to the same schools if they want to."			
Agree	60	63	68
Agree mostly	28	29	24
Disagree mostly	8	6	4
Disagree	4	3	4
"The government in Washington should see to it that people are treated fairly and equally in jobs, no matter what their race may be."			
Agree	62	70	81
Agree mostly	31	26	16
Disagree mostly	5	3	2
Disagree	2	1	1
"It is not the government's business to pass laws about equal treatment for all races."			
Agree	14	12	11
Agree mostly	17	16	10
Disagree mostly	27	28	24
Disagree	41	44	56
SOCIAL DISTANCE BETWEEN RACES			
"Suppose you had a job where your supervisor was a qualified person of a different race (white, black). Would you mind that a lot, a little, or not at all?"			
A lot	5	4	2
A little	25	20	13
Not at all	70	76	85
"If a family of a different race (but same level of education and income) moved next door to you, how would you feel about it?"			
I'd mind it a lot	8	7	4
I'd mind it a little	30	24	21
I wouldn't mind it at all	62	69	75

Table 7-5
(continued)

	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
SOCIAL DISTANCE BETWEEN RACES (cont.)			
"If you have small children now or later on, would you rather they had only white friends, only black friends, or both?"			
I'd like them to have only white friends	17	13	8
I'd like them to have only black friends	3	2	0
I'd like them to have both black and white friends	81	84	91
PERCEIVED RACIAL DISCRIMINATION			
"Do you think many blacks miss out on jobs and promotions because of racial discrimination?"			
Many	39	39	24
Some	43	44	47
Only a few	15	14	22
None at all	4	4	7
"Do you think that many blacks miss out on good housing because white owners will not rent or sell to them?"			
Many	41	40	28
Some	41	44	49
Only a few	14	13	18
None at all	3	2	4
"Do you think that many blacks miss out on good schooling because of racial discrimination?"			
Many	27	30	18
Some	43	42	37
Only a few	20	20	29
None at all	10	8	15

complete acceptance of blacks; nevertheless, we are encouraged by the size and direction of the changes described above.

A more complicated dimension, in many respects, is perceived discrimination against blacks. As the responses in Table 7-5 indicate, most of our respondents from 1969 through 1974 felt that at least some blacks were discriminated against in jobs, housing and schooling. But from 1970 to 1974 there was a distinct downward trend in perceptions of discrimination against blacks. Perhaps this reflects an awareness of affirmative action programs; possibly the respondents generalized from their own shifts in racial attitudes and the changes that were evident among their peers. For whatever reasons, the perceptions of discrimination dropped.

Now let us turn to the relationship between racial attitudes and post-high school experiences, particularly educational experiences. One of our reasons for adding the racial attitude measures to the Youth in Transition study was to explore the following relationship reported by Campbell and Schuman (1968, p. 35):

Among [white] people over 40 years of age, those with higher levels of education are no more or less likely to support an open housing law or to express lack of concern at having a Negro family next door than people of lower educational attainment. The picture is quite different among people age 20 through 39. Here we see that the attitudes expressed by young people whose formal education has not gone beyond high school do not differ from older people of similar educational level. But those who have gone on to college differ substantially both from less educated people of their own generation and from college-educated people of the older generation. More of them believe that there should be a law guaranteeing open housing and more of them say they are not at all disturbed at the prospect of a Negro neighbor.

Two alternative explanations for the relationship summarized above can be distinguished. One explanation is that college is somehow producing the change in racial attitudes. Campbell and Schuman present that interpretation in the following terms (1968, p. 35):

Since World War II those white students who have gone on to college have evidently been exposed to influences which have moved their attitudes away from the traditional pattern in the directions we have observed. We cannot say whether this resulted from specific instruction regarding questions of race or from a general atmosphere of opinion in the college community but it is clear that a sizeable proportion of these postwar generation college students were affected. In contrast, the high schools which our respondents attended during the postwar years seem to have been little more involved in the nation's racial problems than they were in the prewar period.

The alternative explanation for the more liberal racial attitudes among the college educated can be stated this way: those individuals who are less discriminatory and more supportive of civil rights are also more likely to go to college. To state the same explanation as a testable proposition: college-bound individuals will show different racial attitudes before they actually enter college.

The cross-sectional survey design used by Campbell and Schuman, and the other cross-sectional studies reported by Campbell (1971), do not permit a comparison of these alternative explanations, but the present study does. We can compare racial attitudes measured in 1969 (the end of high school), 1970 (the first year of college for many), and 1974 (after nearly all had completed their educations). In each case we can ask whether those who eventually obtained a good deal of education were different in racial attitudes from those who obtained less. Further, by comparing the relationships we can ascertain whether any differences in racial attitudes were in evidence by 1969, prior to entrance into college.

Table 7-6 presents the necessary data. As the first row of the table indicates, each of the racial attitude dimensions measured in 1969 shows some correlation with later educational attainments. For the measure dealing with government action to end discrimination, the relationship with educational attainment actually grows weaker after college. The rather modest relationship for social distance fluctuates slightly, but shows no stronger link with education after the fact (in 1974) than prior (in 1969). Perceived discrimination comes closest to showing an impact of higher education--those bound for further education perceived slightly more discrimination in 1969 than their age-mates ($r = .09$), but the relationship was distinctly stronger in 1970 ($r = .22$) and it remained so in 1974 ($r = .23$). It is also the case that those who attended higher status institutions were more likely than average to perceive high levels of discrimination ($r = .21$ for the 1974 measure).

Several other points may be made rather quickly from the data in Table 7-6:

1. Overall, the relationships between racial attitudes and educational attainment are not very strong.
2. The relationships with academic ability, measured in 1966, are consistently stronger than those for later educational attainment.
3. Family socioeconomic level is also related to racial attitudes, often just as strongly as is educational attainment.

These three findings cast further doubt upon the notion that college experiences played a key role in shaping the racial attitudes of this cohort of young men.

4. Occupational attainments, as reflected in the status measure, show little or no relationship to racial attitudes.
5. Military experience also shows virtually no association with these measures of racial attitudes.

Table 7-6
Racial Attitudes Correlated with Selected Other Variables (Whites Only)

Product-Moment Correlations with:

	Government Should End Discrimination			Social Distance Between Races			Perceived Racial Discrimination		
	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
Educational Attainment (1974)	.18	.15	.09	-.13	-.17	-.14	.09	.22	.23
College Status Ranking ^a	.09	.13	.05	-.07	-.13	-.08	.08	.19	.21
College Mean ACT Score ^a	.12	.14	.00	-.11	-.15	-.10	.12	.20	.20
Ability Composite (1966)	.27	.26	.13	-.22	-.28	-.17	.19	.30	.29
Socioeconomic Level (1966)	.15	.14	.02	-.15	-.19	-.11	.16	.21	.26
Status of Occupation (1974)	.16	.10	.03	-.09	-.07	-.04	.03		.07
Military Service (by 1974)	-.03	-.03	-.01	.01	-.02	-.02	.01	-.06	-.07

^a Correlations are based on only those who attended a college or university.

How shall we interpret the findings summarized above? It may be helpful to place them in the context of other recent studies of racial attitudes and other studies of youth values. Campbell's (1971) analysis of white attitudes toward blacks during the period of 1964 through 1970 led him to conclude that there was an overall shift in a positive direction, and that this shift was not limited to particular educational subgroups. More recent surveys which extend these findings through 1974 simply reinforce Campbell's earlier conclusion that across a variety of different subgroupings of whites the trend in attitudes toward blacks has consistently been one of gradual movement in a more positive direction.⁴ This suggests that our own finding of a shift in young men's racial attitudes may be largely a reflection of the national trend, rather than a result of any particular set of experiences occurring in the first few years after high school.

What about the lack of clear and consistent evidence of "college effects" on racial attitudes? Yankelovich (1971) and others have suggested that some college students are "forerunners"--individuals who hold social values which will eventually be diffused throughout the larger society. His more recent work, based on a comparison of youth surveys (cross-sections) conducted in 1969 and 1973, led to the conclusion that "Perhaps the single most striking finding of the study is the extent to which the gap between college and noncollege youth has closed..." (Yankelovich, 1974, p. 23). This suggests that our own lack of distinct evidence for a college impact upon racial attitudes may be due to an overall convergence in values between college and noncollege youth. If nothing else, the shift in attitudes has approached the limits of two of the racial attitude scales used in our study, thus making a greater similarity between college and noncollege responses almost a necessity.

Returning now to Campbell and Schuman's discussion of differences in racial attitudes linked to the college experience, we can offer

the following summary and interpretation of our own findings. There are modest differences in racial attitudes between those whites in the high school class of 1969 who went to college and those who did not; however, these differences were to some extent evident by the end of high school, before any socializing effect of college could have taken place. The fact that these differences are not larger, and the fact that they were evident to some extent prior to college entrance, may indicate that in the area of racial attitudes the college educated are now less clearly the "forerunners." Perhaps the seventies represent a "post-forerunner" stage in which (a) the brighter and more able students show more positive racial attitudes before they leave high school, and (b) the gap in attitudes between educational groups is growing smaller.

Footnotes

¹We decided not to include the measure of impulse to aggression among the affectives states discussed here because a change in wording between Time 1 and Time 2 makes the pattern of correlations across time difficult to interpret (see Bachman et al., 1971, p. 116 for details on the change in wording).

²For an extended discussion about the ways that views on military influence are linked to actual service in the armed forces, see Bachman and Blair (1975a, 1975b).

³In this section we borrow heavily from an earlier report of the 1969 and 1970 data (Bachman and vanDuinen, 1971).

⁴Based on personal communication from A. Campbell.

CHAPTER 8

CHANGES IN JOB ATTITUDES AND ASPIRATIONS

Among the most important decisions to be faced by young men in high school and in the years beyond is the kind of work they will be doing for much of their lifetime. This is a complicated decision--really a set of interrelated decisions made and revised over a number of years. It is a difficult process for social scientists to conceptualize, and perhaps even more difficult to measure in surveys. Nonetheless, this area has been of central importance throughout the Youth in Transition project, and thus we have made some attempts to measure job attitudes and occupational aspirations. At each of the five data collections respondents were asked what sort of work they expected to be doing for a living. They were also asked to rate the importance of a number of different job characteristics. The answers to these questions have shown some very interesting patterns of both change and consistency. In this chapter we examine these patterns and their relationship to post-high school experiences.

Occupational Aspirations

The answers to the question "What sort of work do you think you might do for a living?" were coded and converted to the Duncan socioeconomic status index (Duncan, 1961). At the start of tenth grade, aspirations were quite high--a mean Duncan scale value of 62. Five years after high school, scores had declined only modestly to a mean value of 55. This remains a very high average level of occupational aspiration; by way of contrast, the father of these young men (as of 1966) had occupations with a mean Duncan status level of 39.

Some of the decline in occupational aspirations from age 15 to age 23 can be linked to changes in educational aspirations. We noted

in Chapter 5 (see Figure 5-2) that those who planned in tenth grade to go to college, but who did not actually do so, showed a substantial drop in the status of their aspired occupations. Given the strong link that exists between actual educational and occupational attainments, this drop in occupational aims would seem to be a realistic adjustment to a change in the level of education to be attained.

Although there are some important shifts in occupational aspirations, such as the one noted above, the overall pattern is one of relatively great stability. Individuals may shift their preferences from one occupation to another, but the new occupation tends to be similar in status to the one preferred earlier. The estimated levels of stability (and also reliability) for the job status measure are substantially higher than those for the dimensions considered in the preceding chapter. The estimated annual reliability is above .9 during the high school years; it drops slightly below that during the first year after high school; and then it averages about .95 during the next four years (see Appendix F). We conclude that overall occupational aims, as reflected in the Duncan status measure, show a good deal of consistency by the time a young man reaches high school.

The pattern of stability in occupational aspirations extends to include its relationships with background and ability dimensions. As Table 8-1 indicates, family socioeconomic level shows a substantial relationship with status of aspired occupation during tenth grade ($\underline{r} = .37$), and its relationship with occupational aspirations five years after high school remains equally strong ($\underline{r} = .34$). Academic ability also shows a strong and consistent pattern of correlation with occupational aspirations ($\underline{r} = .45$ with aspirations at Time 1, $\underline{r} = .41$ with aspirations at Time 5).

Relationships with Post-High School Experiences. The first row of correlations in Table 8-1 indicates that occupational aspirations

Table 8-1
Status of Aspired Occupation Correlated with Selected Other Variables

	Product-Moment Correlation with Status of Aspired Occupation Measured at:				
	Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
Educational Attainment (1974)	.47	.53	.56	.59	.55
College Status Ranking ^a	.29	.38	.34	.32	.31
College Mean ACT Score ^a	.26	.28	.29	.26	.30
Ability Composite (1966)	.45	.45	.48	.45	.41
Socioeconomic Level (1966)	.37	.34	.36	.38	.34
Status of Occupation (1974)	.26	.28	.30	.31	.45
Employment (as of 1974)	.02	.04	-.01	.00	.00
Military Service (by 1974)	-.14	-.20	-.19	-.15	-.16
Married (as of 1974)	-.15	-.18	-.17	-.22	-.17
Married and a Parent (1974)	-.18	-.24	-.24	-.30	-.19

^aCorrelations are based on only those who attended a college or university.

are very strongly associated with educational attainment. The relationship is also shown in Figure 8-1. What is particularly interesting is that there is very little change in the relationship over time--occupational aspirations at the end of high school (Time 3) show just as strong a correlation with later educational attainment as do occupational aspirations five years after high school ($r = .56$ in both instances.) During the five years after high school, there is virtually no change in mean aspirations for those in the highest and lowest categories of educational attainment; the middle categories, those with some college or a bachelor's degree show a slight drop in mean aspirations.

For those who went to college, there is also a relationship between the status of the college and status of aspired occupation--those attending higher status institutions show higher occupational aspirations. Here again we find that the pattern of correlations across time shows little in the way of change which might indicate an effect of post-high school experience. The college status rankings and college mean ACT scores relate just about as strongly to occupational aspirations in tenth grade as they relate to aspirations about eight years later. It appears that those who plan to, and do, attend higher status institutions have high occupational aspirations throughout high school as well as during the years which follow.

Turning next to relationships with actual occupational attainments, we see that those who had higher occupational aspirations during the high school years did indeed attain higher status occupations five years after high school (correlations range from .26 for tenth grade aspirations to .30 for twelfth grade aspirations). But it appears that there is a substantially stronger relationship between attainments and aspirations five years after high school--the correlation is .45.

Figure 8-2 shows the relationship strengthening across time. The increased value of the correlation results from the fact that

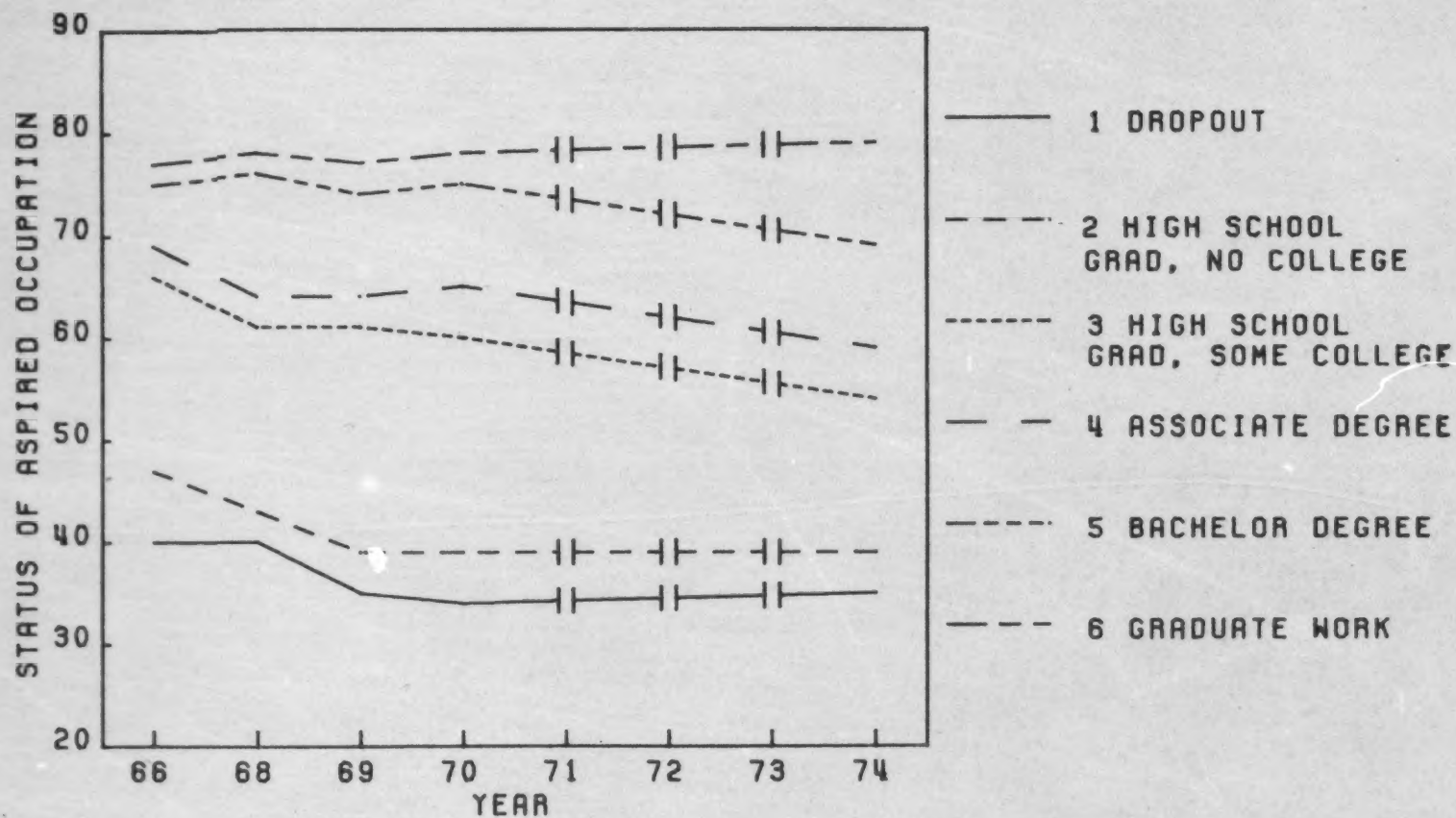


Figure 8-1. Status of Aspired Occupation by Educational Attainment

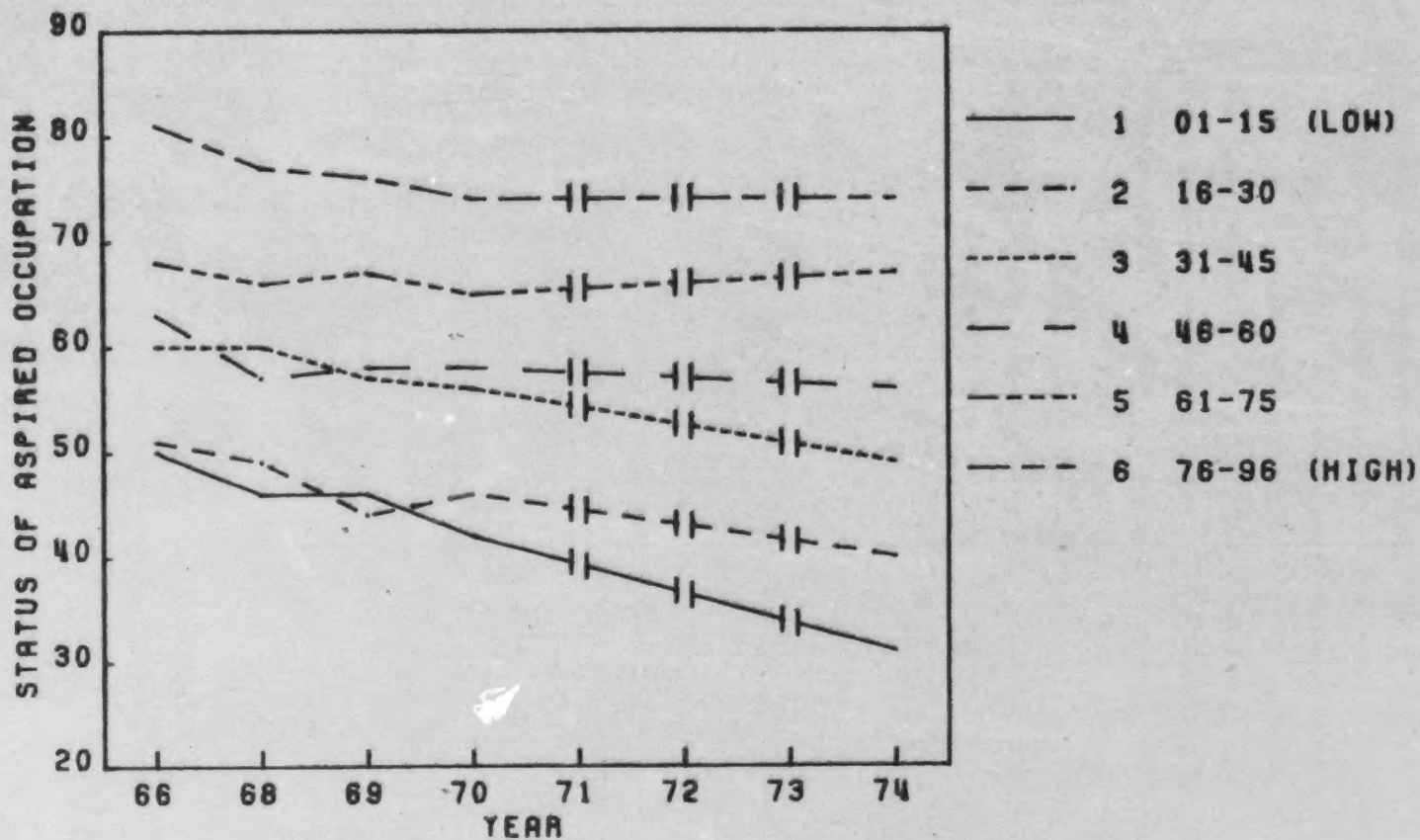


Figure 8-2. Status of Aspired Occupation by Occupational Attainment

those individuals who are in lower status jobs (01-39) as of 1974 show a stronger decline across time in the average status of their aspired occupations. Those in the higher status jobs (60 or over) show rather little decline.

Employment versus unemployment shows no correlation with occupational aspirations. If being unemployed tends to lower occupational aims, our data provide no evidence of it for young men in their early twenties.

There is a slight negative association between military service and occupational aspirations; however, the pattern does not suggest that there was any particular impact as a result of being in the service. Instead, we see that those who later entered the service showed slightly lower occupational aspirations during their high school years as well as during the five years following high school. In part, at least, the lower aspirations may reflect the fact that those who entered military service were slightly lower than average in family socioeconomic level ($\bar{r} = -.18$), academic ability ($\bar{r} = -.14$), school grades ($\bar{r} = -.21, -.20, -.19$), and college plans ($\bar{r} = -.20, -.23, -.28$).

One other dimension of experience which we found to be correlated with occupational attainment is marital and parental status. As Figure 8-3 indicates, there is a rather small (five Duncan status points) but quite consistent difference in the main occupational aspirations of respondents who were not yet married by Time 5 (about age 23) and those who were married but did not have children. Those who did have children by Time 5 showed substantially lower occupational aspirations. The differences in aspirations were just about as large at the start of the study as at the end, but at Time 4 (one year after high school) the differences were somewhat larger. Both the unmarried respondents, and those who were married but had no children, showed a fairly steady downward shift in aspirations throughout the study. Those who were parents by Time 5, on the other hand, showed a much steeper drop in

aspirations throughout the first years of data collection, followed by a very slight rise in aspirations from Time 4 to Time 5. It is possible that a more extended analysis of the data from these young men who were parents might show some relationship between the date of the first child's birth and the shifts in aspirations, but such an analysis goes beyond the scope of the present report. It is sufficient here to note that in the case of this dimension of post-high school experience, as we found for military service, there were differences in family background, ability, school performance, and college plans which were evident from the start of the study. Thus the differences in occupational aspirations among the three subgroups shown in Figure 8-3 may to a large degree be traceable to these other differences rather than to any direct impact of marriage and parenthood.

Job Attitudes

A series of questionnaire items administered at all five data collections was designed to assess respondents' attitudes toward different aspects of jobs. An examination of intercorrelations among the items after the first data collection led to the construction of two scales, one showing strength of preference for "a job that pays off," and the other showing preference for "a job that doesn't bug me." The questions and response distributions for all five points in time are presented in Table 8-2.

At this point it may be useful to quote from a report based on only the Time 1 (tenth grade) data:

Early analyses indicated that although these two scales are positively correlated ($r = .13$), they consistently show opposite relationships with other dimensions (such as SEL, intelligence, and level of aspired occupation). An examination of the items in Table 8-2 will help account for these preliminary findings. Agreement with the "job that pays off" items implies a good deal

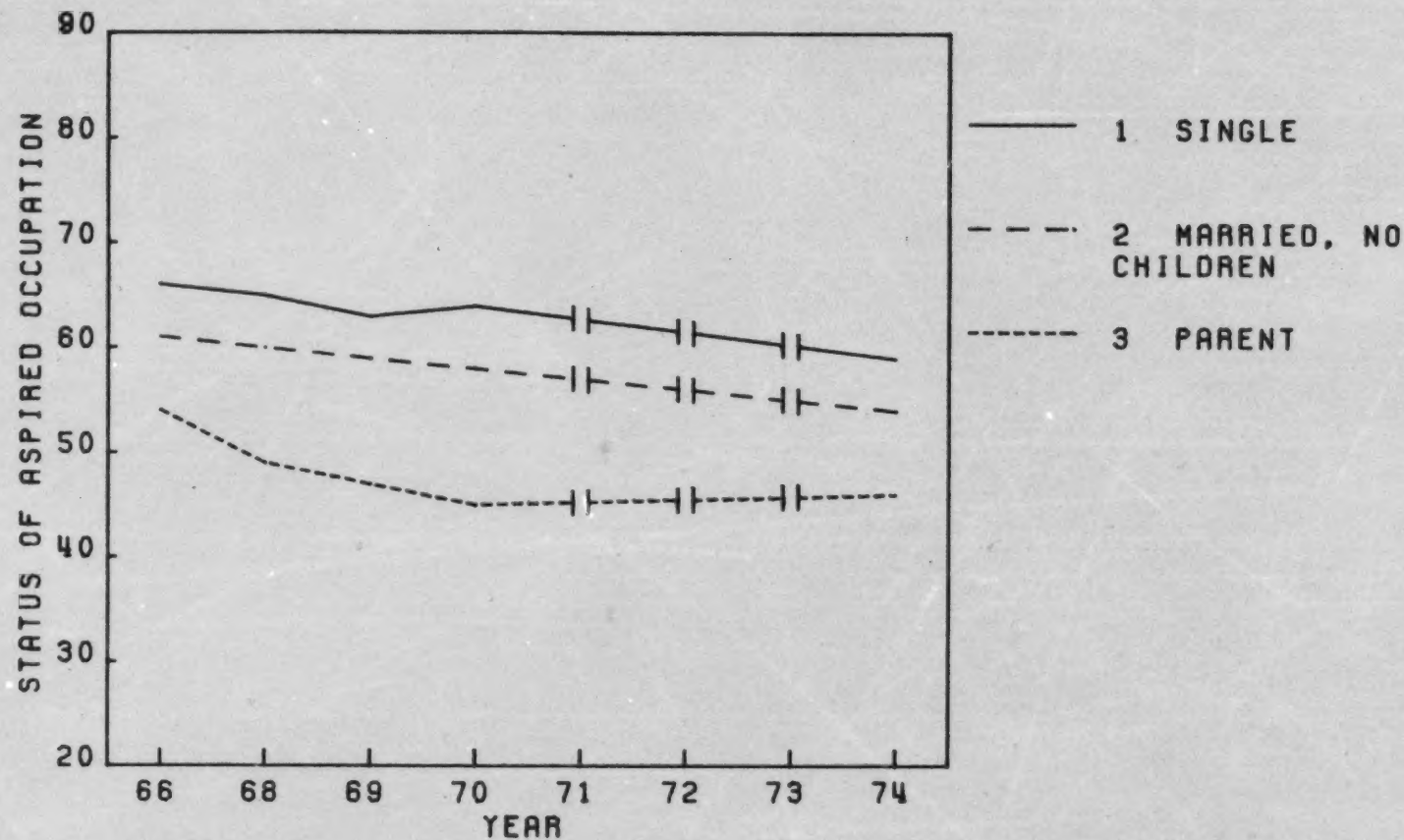


Figure 8-3. Status of Aspired Occupation by Marital/Parental Status

TABLE 8-2

Job Attitude Items: Percentage Distributions at Five Times

	Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
	Percent responding at:				
1. * A job where there's no one to boss me on the work					
Very important	14.5	13.0	11.6	14.8	18.3
Pretty important	43.2	37.4	40.9	44.8	33.5
A little important	29.2	33.6	35.4	30.8	28.9
Not important	13.0	16.1	12.1	9.5	19.3
4. A job where I don't have to work too hard					
Very important	12.3	7.6	6.2	8.6	3.9
Pretty important	30.9	27.0	24.4	26.1	12.2
A little important	37.5	42.5	45.2	43.4	36.8
Not important	19.3	22.9	24.1	21.9	47.1
5. A clean job, where I don't get dirty					
Very important	15.4	11.3	9.9	11.6	5.9
Pretty important	26.8	25.2	24.6	24.5	17.2
A little important	31.0	34.2	36.8	36.6	29.9
Not important	26.7	29.3	28.7	27.3	47.0
7. A job where I don't have to take a lot of responsibility					
Very important	10.6	6.5	5.3	4.9	2.0
Pretty important	28.1	21.2	18.8	17.5	5.3
A little important	37.3	37.0	41.4	36.5	19.7
Not important	24.0	35.3	34.5	41.1	73.0
8. A job that leaves me a lot of free time to do what I want to do					
Very important	24.0	16.7	15.3	17.1	15.7
Pretty important	38.5	39.1	38.7	44.0	36.8
A little important	28.3	32.6	36.3	30.5	33.2
Not important	9.1	11.5	9.7	8.4	14.2
10. A job that my friends think a lot of-- has class					
Very important	24.9	15.0	11.3	12.2	5.0
Pretty important	35.2	27.8	26.9	27.5	16.4
A little important	25.6	35.2	40.3	35.3	30.1
Not important	14.3	21.9	21.5	24.9	48.5

Table 8-2
(continued)

	Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
13. A job that doesn't make me learn a lot of new things					
Very important	9.8	6.2	4.2	5.1	2.4
Pretty important	18.6	13.8	10.5	11.4	2.3
A little important	33.2	34.4	35.7	30.4	10.7
Not important	38.4	45.6	49.7	53.0	84.7
2. A job that is steady, no chance of being laid off					
Very important	62.5	65.1	59.5	63.2	63.0
Pretty important	31.4	29.1	33.6	30.7	27.3
A little important	4.8	4.7	6.2	5.1	7.2
Not important	1.3	1.1	0.7	1.1	2.5
3. A job where I can learn new things, learn new skills					
Very important	57.8	55.9	51.2	53.6	59.9
Pretty important	32.9	36.7	41.1	40.0	33.3
A little important	8.2	6.7	7.0	5.5	5.9
Not important	1.1	0.7	0.7	0.9	0.9
6. A job with good chances of getting ahead					
Very important	69.2	65.3	63.5	61.1	68.7
Pretty important	25.7	28.9	31.5	32.6	24.7
A little important	4.2	5.0	3.6	5.3	5.0
Not important	0.9	0.8	1.4	1.1	1.6
9. A job where the pay is good					
Very important	64.6	57.3	55.9	53.1	54.5
Pretty important	29.4	36.8	37.7	39.7	38.1
A little important	4.5	4.9	5.5	6.0	5.9
Not important	1.5	1.1	0.9	1.2	1.5
11. A job that uses my skills and abilities-- lets me do the things I do best					
Very important	63.1	61.1	58.8	56.0	65.2
Pretty important	30.3	32.8	33.9	36.8	29.6
A little important	5.5	5.0	6.6	6.5	4.2
Not important	1.1	1.0	0.7	0.7	1.0
12. A job that has nice friendly people to work with					
Very important	48.9	48.2	46.0	48.7	48.2
Pretty important	40.9	41.7	44.2	42.6	41.2
A little important	9.0	8.8	8.7	7.6	8.6
Not important	1.2	1.3	1.0	1.1	1.9

* The question numbers indicate the sequence in which the items appeared in the questionnaire.

of ambition--an interest in using present skills, learning new skills, getting ahead, and making good pay. Agreement with the "job that doesn't bug me" items suggests something quite different from ambition; in fact it shows a tendency to avoid many things that we associate with ambition--things such as hard work, long hours, responsibility, and learning new skills. This difference in orientation between the two scales helps us understand why they show opposite relationships with other dimensions, but it leaves unexplained the fact that the two scales have a slight positive correlation with each other. We suspect that the positive correlation reflects some degree of response set or positive response bias. There is a strong tendency to check the "job that pays off" items as being very important. This tendency is sharply reduced, but by no means eliminated, in the "job that doesn't bug me" items. Obviously, some respondents checked both kinds of items as being important for themselves, and this is the basis for the positive correlation between the two scales.

Given these preliminary findings and our interpretation of them, it seemed appropriate to compute a summary index of *ambitious job attitudes*, an index which gives positive weight to the "job that pays off" items and negative weight to the "job that doesn't bug me" items. Such an index neatly cancels the effects of positive response bias (since a tendency toward checking "very important" operates half positively and half negatively in its effect on the index score). (Bachman, 1970, pp. 139-142)

Changes in Job Attitudes. The changes over time, as indicated in Table 8-2, certainly confirm our original decision to group the items into two scales. Of the seven items in the "job that doesn't bug me" scale, five show very large shifts in responses, and a sixth shows some amount of change, all in the direction of reduced importance.

The most extreme examples are a shift from 24 percent at Time 1 to 73 percent at Time 5 saying that it is "not important" to have "a job where I don't have to take a lot of responsibility," and a shift from 38 percent to 85 percent saying it is not important to have "a job that doesn't make me learn a lot of new things." Other dimensions showing a similar, but less spectacular, decline in importance are not having to work too hard, not having to get dirty, and "a job that my friends think a lot of--has class." The six items in the "job that pays off" scale, on the other hand, show virtually no change at all in response distributions. Good pay, job security, a chance to learn new things and get ahead, use of skills and abilities, and friendly co-workers, are all characteristics that are rated "very important" by a majority of respondents and "pretty important" by most others.

The changes in responses of these young men, from age 15 to age 23, can be summarized in this way. The distinctions among items which were already evident at the start of the study, have grown much sharper five years after high school. The young men in our sample continue to want jobs that offer good opportunities; they have become much less worried about whether a job requires them to work hard, get dirty, take responsibility, and the like.

Relationships with Educational and Occupational Attainment.

The overall shift in response distributions is not the only change that occurs in job attitudes. Another quite substantial change occurs in the relationship between job attitudes and educational attainment. At the start of tenth grade, those who would later go on to college showed more ambitious job attitudes than those who would not. Five years after high school, that relationship had actually reversed somewhat, and those with less education were a bit higher on our summary measure of ambitious job attitudes. The correlations for each item, as well as for the indexes, are presented in Table 8-3. Note that for each of the "job that doesn't bug me" items the Time 1 measure is negatively correlated with later educational attainment, while the Time 5 measure is less negatively correlated (and is positive for

four out of the seven items). The index based on these items shows a substantial shift across time; the Time 1 index correlates $-.21$ with later educational attainment, while the Time 5 index correlates $.07$.

The "job that pays off" items also show a shift in correlations with educational attainment. The items measured at Time 1 all show a positive correlation with later educational attainment, whereas by Time 5 the correlation is negative for all but one item (and that item shows a weaker correlation at Time 5 than at Time 1). The index based on these items reflects these changes; the Time 1 measure correlates $.13$ with educational attainment, and the Time 5 measure correlates $-.07$.

The shift in relationship between job attitudes and educational attainment shows up most strongly in the summary measure of ambitious job attitudes. This index, measured at the start of tenth grade, correlates $.27$ with later educational attainment. Measured nearly eight years later, this index of job attitudes correlates $-.11$ with educational attainment. In other words, those who were headed toward higher levels of education were more ambitious than their fellow students in tenth grade; but after the different levels of education were actually attained, the positions were reversed, with the less educated showing slightly higher endorsement of most ambitious job attitude items.

This overall pattern is not reflected equally in all items. An examination of Table 8-3 indicates that some items show greater changes than others, and some show a reversal in the direction of correlation while others show only a change in strength. Thus it will be useful to examine some of the items separately in order to gain a fuller understanding of the way job attitudes are linked to educational attainment.

Two items of particular interest express preferences for "a job where I don't have to take a lot of responsibility" and "a job that doesn't make me learn a lot of new things." We noted earlier (see Table 8-2) that both of these items showed a very large increase in

TABLE 8-3
Job Attitudes Correlated with Educational Attainment

		Product-Moment Correlation Between 1974 Educational Attainment and Each Job Attitude Dimension Measured at:				
		Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
INDEX:	Preference for "A Job that Doesn't Bug Me"	-.206	-.107	-.113	-.084	.068
ITEMS:	1. A job where there's no one to boss me on the work	-.052	.017	.019	.075	.122
	4. A job where I don't have to work too hard	-.139	-.121	-.103	-.116	-.084
	5. A clean job, where I don't get dirty	-.054	-.022	-.099	-.110	.122
	7. A job where I don't have to take a lot of responsibility	-.273	-.208	-.242	-.173	-.175
	8. A job that leaves me a lot of free time to do what I want to do	-.052	.025	-.040	.088	.123
	10. A job that my friends think a lot of--has class	-.098	-.014	-.027	-.034	.186
	13. A job that doesn't make me learn a lot of new things	-.252	-.171	-.172	-.196	-.167
INDEX:	Preference for "A Job that Pays Off"	.134	.086	.037	-.014	-.072
ITEMS:	2. A job that is steady, no chance of being laid off	.085	.000	-.050	-.063	-.149
	3. A job where I can learn new things, learn new skills	.047	.022	-.015	-.020	-.052
	6. A job with good chances of getting ahead	.169	.165	.108	.038	-.015
	9. A job where the pay is good	.029	-.028	-.031	-.107	-.213
	11. A job that uses my skills and abilities--lets me do the things I can do best	.167	-.141	.114	.109	.112
	12. A job that has nice friendly people to work with	.018	.016	.023	.007	-.019
INDEX:	Ambitious Job Attitudes	.266	.149	.115	.062	-.108

the proportion who rated them "not important." As they grow older, it appears that young men are increasingly willing to take on responsibilities and jobs that require them to learn a lot of new things. These attitudes show some differences linked to educational attainment. The more education an individual eventually gains, the more likely it is that he started out with a greater willingness to take on responsibilities and learn new things (correlations of .27 and .25); eight years later a good deal of that difference remains (correlations of .18 and .17). Figure 8-4 presents the relationship graphically for the responsibility item (the picture is almost identical for the item about learning new things). In this instance we see that the less well educated are to some extent following after their better educated classmates, and to a slight degree they are catching up.

A rather different pattern of change is displayed by the item dealing with good pay. As Figure 8-5 indicates, at the start of tenth grade there are few differences in importance ratings associated with later educational attainment--all educational attainment groups started out with about 65 percent rating good pay as very important, except for the high school dropout group which had about 55 percent in that category. Eight years later, however, over 70 percent of the dropouts rated good pay as very important while less than half that many of those with graduate education gave that high a rating to good pay. In a very real sense those with the highest levels of education can afford to be less concerned about good pay, because they are headed toward the best paying jobs. The high school dropouts, on the other hand, have much more reason to worry about pay and their responses suggest that many of them do. The same interpretation applies to a concern about a job that is steady with no chance for being laid off--at age 23 the better educated show somewhat lower concern about this dimension than do the less educated ($r = -.15$).

It is difficult to summarize the several different ways in which job attitude items are linked to educational attainment. At the most

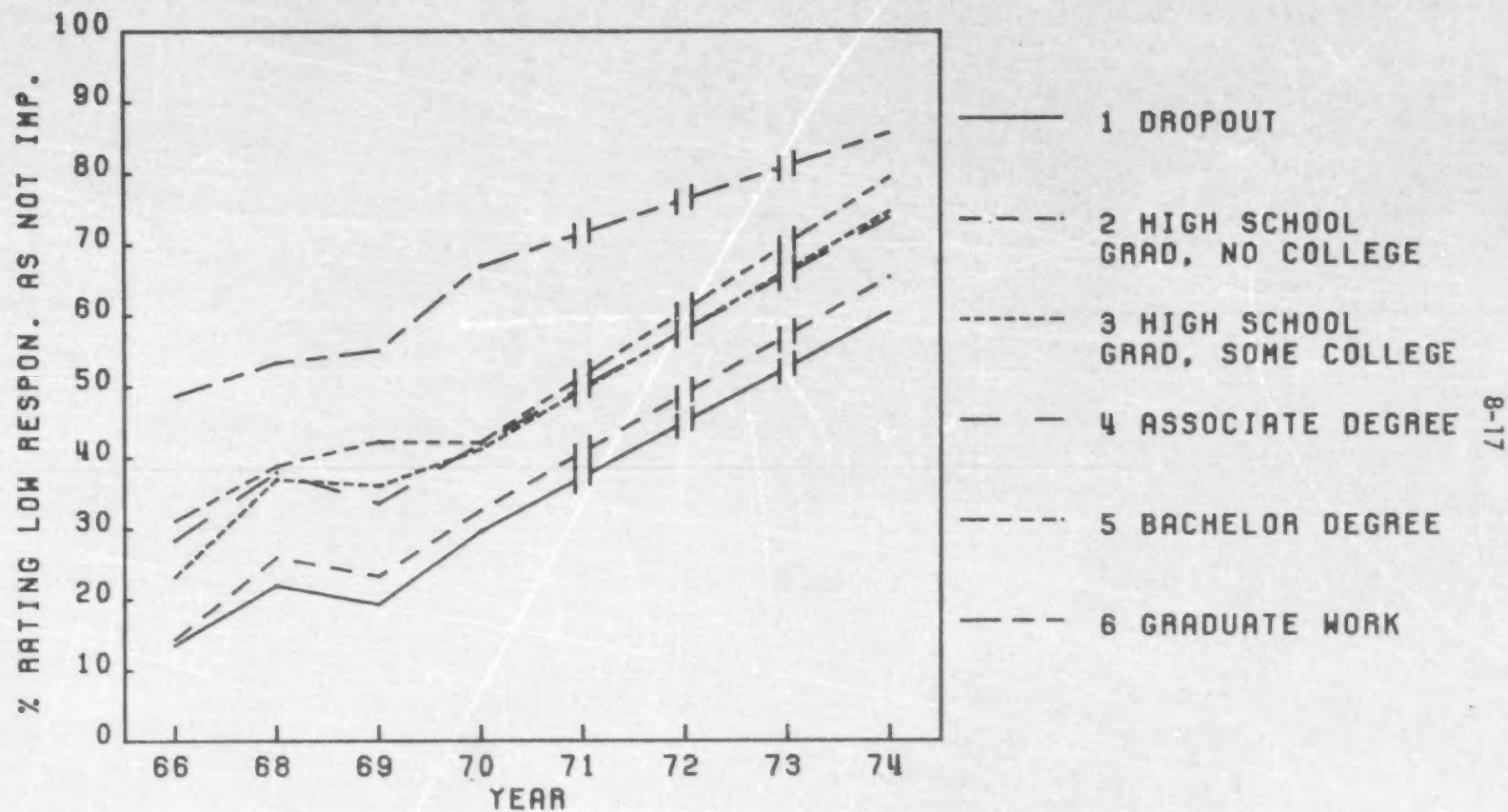


Figure 8-4. Preference for Low Responsibility by Educational Attainment

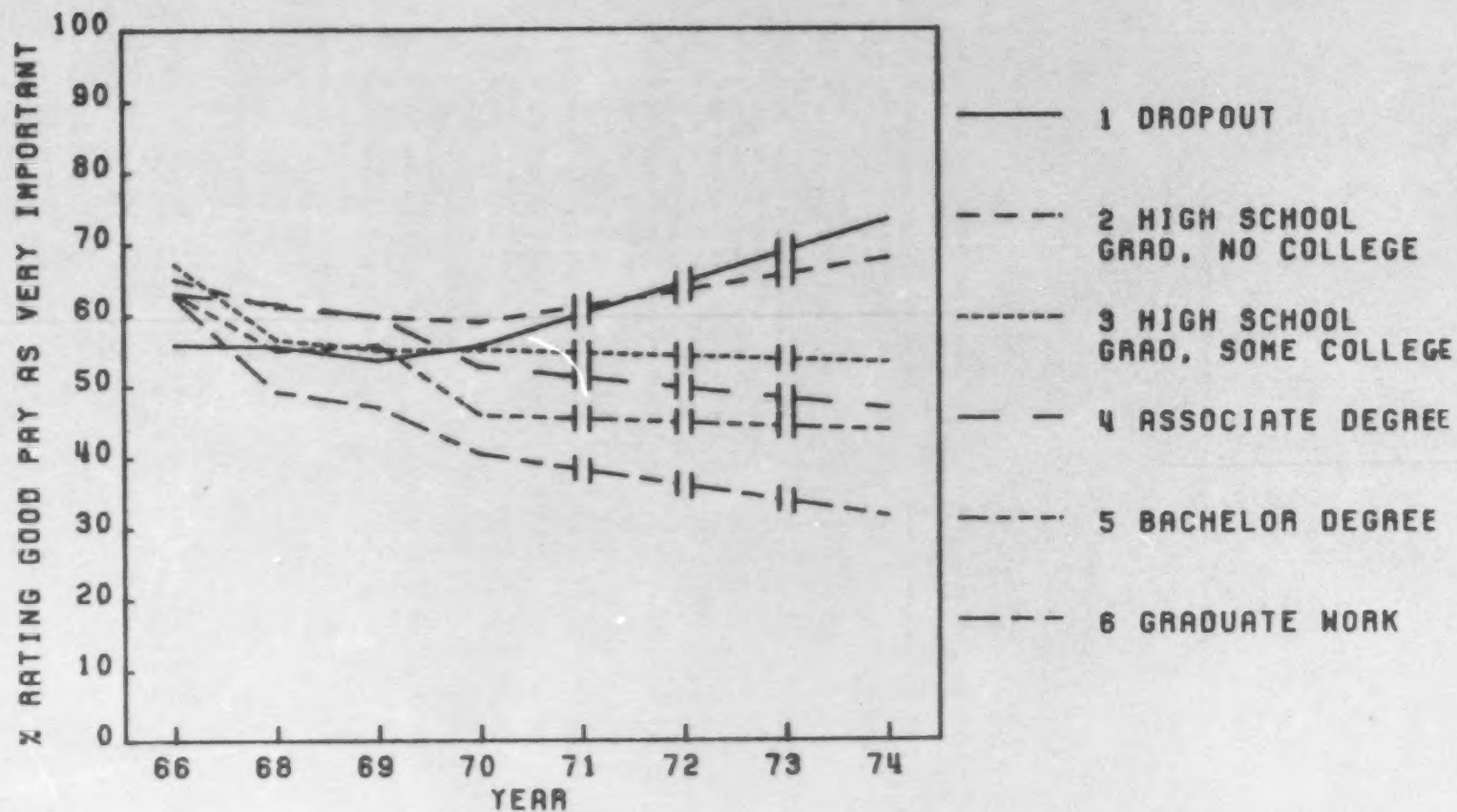


Figure 8-5. Preference for Good Pay by Educational Attainment

general level, we can say that the differences in attitudes evident at tenth grade were diminished and in some instances reversed eight years later. Those with lower levels of educational attainment became much more willing to take on responsibilities, learn new things, and get dirty if necessary; they also became more concerned about good pay and job security.

A similar set of conclusions may be applied to the relationship between job attitudes and status of occupation (at Time 5). Those who ended up with the higher status jobs at Time 5 had somewhat higher levels of ambitious job attitudes at the start of the study ($r = .19$) but by the end of the study the correlation was .01 (see Table 8-4). As Table 8-4 indicates, the same items which showed strong associations with educational attainment also were most strongly linked to occupational status, although the latter relationships tend to be somewhat weaker.

Relationships with Other Dimensions. The previous section provided a rather detailed look at the thirteen job attitude items as they relate to educational and occupational attainment. For this section we concentrate on the summary index of ambitious job attitudes. It may be worth noting that the relationship between the two ingredients of that index, the "job that doesn't bug me" scale and the "job that pays off" scale, remains essentially the same across all five data collections; in each case there is a modest positive correlation between the two scales, but they correlate in opposite directions with other dimensions. For this reason, the measure of ambitious job attitudes, which gives positive weight to the "pay off" items and negative weight to the "bug me" items, continues to be a very effective summary of the job attitude items.

Table 8-5 presents the relationships between the ambitious job attitudes index, measured at five points in time, and a number of background, ability, and post-high school experience dimensions. The pattern of shifting correlations observed earlier for educational attainment and job status can also be seen for family socioeconomic level (the

TABLE 8-4
Job Attitudes Correlated with 1974 Occupational Status

		Product-Moment Correlation Between 1974 Occupational Status* and Each Job Attitude Dimension Measured at:				
		Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
INDEX:	Preference for "A Job that Doesn't Bug Me"	-.144	-.112	-.086	-.056	.035
ITEMS:	1. A job where there's no one to boss me on the work	-.046	-.006	-.027	.017	.061
	4. A job where I don't have to work too hard	-.114	-.116	-.056	-.078	-.087
	5. A clean job, where I don't get dirty	-.010	-.030	-.001	.049	.168
	7. A job where I don't have to take a lot of responsibility	-.157	-.154	-.187	-.135	-.154
	8. A job that leaves me a lot of free time to do what I want to do	-.070	-.007	.001	.035	.027
	10. A job that my friends think a lot of--has class	-.082	-.076	-.015	.011	.162
	13. A job that doesn't make me learn a lot of new things	-.179	-.119	-.098	-.158	-.133
INDEX:	Preference for "A Job that Pays Off"	.098	.040	.038	.094	.058
ITEMS:	2. A job that is steady, no chance of being laid off	.084	.043	.017	-.011	-.032
	3. A job where I can learn new things, learn new skills	.030	-.025	-.002	.040	.060
	6. A job with good chances of getting ahead	.103	.090	.113	.103	.116
	9. A job where the pay is good	-.002	-.046	-.067	.009	-.051
	11. A job that uses my skills and abilities--lets me do the things I can do best	.112	.055	.045	.165	.128
	12. A job that has nice friendly people to work with	.042	.034	.029	.072	-.014
INDEX:	Ambitious Job Attitudes	.192	.123	.094	.103	.009

* This table includes only those in the civilian work force at Time 5 (N = approximately 965). It excludes those in military service and those who were primarily students. Because of these restrictions, the correlations for index scores do not match exactly those in Table 8-5 and in Appendix G.

correlation is .19 with the Time 1 job attitudes, and it drops gradually to -.09 with Time 5 attitudes) and for the composite ability measure (a much larger drop from .33 to -.07). The more gifted students in tenth grade, and those from higher status families, showed above average levels of job ambition at the start of the study but eight years later the others had caught up and even slightly surpassed them in concern for a good job.

There is some relationship between college status measures and ambitious job attitudes, but it may represent little more than a watered-down reflection of the relationship with ability.

The fact that ambitious job attitudes show such a strong correlation with ability in tenth grade may provide an important key to much of what we have been discussing thus far. High ability students, who are also most likely to attain high levels of education and job status, were much more likely to show high job ambition scores in tenth grade. The question remains, why did the less able students show such a disproportionate increase in ambitious job attitudes? Was it simply a "ceiling effect"--an upper limit to the ambitious job attitude scale that permitted the less able to "catch up"? (That may be true for some of the items, but not for all of them.) Was it something about the educational experience that led to a decrease in emphasis on some things like pay and job security? Alternatively, was it the work experience of those who did not go on to college that led them to become increasingly willing to take on responsibilities, work hard, and the like? Each of these explanations may be correct to some degree; since the several different kinds of post-high school experiences are complexly interconnected, we cannot disentangle these several possible causal explanations. What we can do is note that for most of the items we have been considering, the various ability and education groups start out in tenth grade a good deal more different than they wind up eight years later.

Several other dimensions of post-high school experience shown in Table 8-5 present simpler patterns of relationship with ambitious job attitudes. Employment (versus unemployment) shows little consistent

TABLE 8-5

Ambitious Job Attitudes Correlated with Selected Other Variables

	Product-Moment Correlation with Ambitious Job Attitudes Measured at:				
	Time 1 (1966)	Time 2 (1968)	Time 3 (1969)	Time 4 (1970)	Time 5 (1974)
Educational Attainment (1974)	.27	.15	.12	.07	-.11
College Status Ranking *	.16	.08	.06	.02	-.08
College Mean ACT Score *	.08	.03	-.01	-.01	-.10
Ability Composite (1966)	.33	.26	.24	.22	-.07
Socioeconomic Level (1966)	.19	.13	.09	.07	-.09
Status of Occupation (1974)	.17	.11	.11	.09	.00
Employment (as of 1974)	.06	.03	.02	.02	.09
Military Service (by 1974)	-.02	-.01	.02	.09	.10
Married (as of 1974)	-.06	.03	.05	.06	.19
Married and a parent (1974)	-.08	-.01	.00	.01	.15

* Correlations are based on only those who attended a college or university.

change in correlation across time (from .06 with the Time 1 measure of ambitious job attitudes to .09 with the Time 5 measure). Military service shows a bit more of a change; those who later entered the service were no different in job attitudes from others during the high school years (correlations ranged from -.02 to .02), but afterward they were very slightly higher in ambitious job attitudes (correlations of .09 and .10). Whether this reflects some effect of military service, or simply the absence of whatever "college effect" may have taken place for many others, is not entirely clear. But whatever the particular path of causation, we do see in this case a slight difference following exposure to a particular post-high school environment which was not evident prior to that experience.

Another set of experiences, marriage and parenthood, also shows a relationship with ambitious job attitudes. As Figure 8-6 indicates, those who remained single at Time 5 showed some increase in ambitious job attitudes throughout the study; however, those who married, and particularly those who had children, showed somewhat stronger increases in job ambition. Here again we cannot be sure that marriage and parenthood per se lead to a relatively large increase in ambition, since those who were married and parents were also lower in average educational attainment. Thus they would be less likely to show a "college effect" on job attitudes, or more likely to show a "non-college effect."

Summary and Conclusions

Stability and Change. The young men in our sample aspired to fairly high status jobs, on the average, and these aspirations remained high and rather consistent throughout the eight-year span of the study. Not surprisingly, aspirations were highest among those with the greatest academic ability and highest levels of eventual educational attainment.

Preferences for "a job that pays off"--one with good pay, security, opportunities for advancement, friendly co-workers, and the chance to use abilities and learn new things--remain quite high during high school and the five years beyond. On the other hand, there is a very substantial shift in attitudes about avoiding the more demanding aspects of work--it

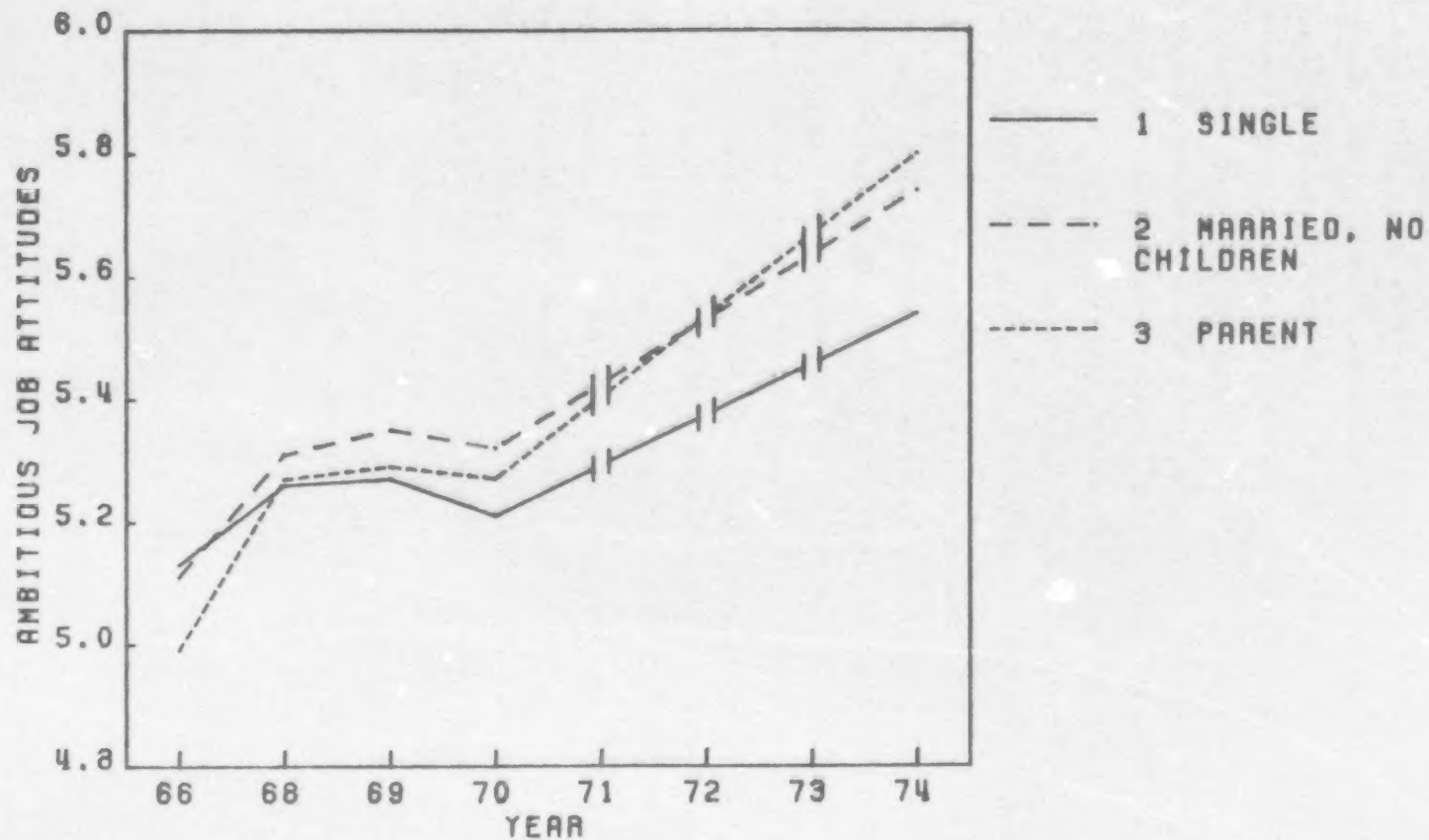


Figure 8-6. Ambitious Job Attitudes by Marital/Parental Status

becomes increasingly less important to avoid working hard, getting dirty, having to learn new things and take a lot of responsibility. For whatever combination of reasons, there seems to be a dramatic increase in the willingness to take on the more difficult aspects of a job.

Links with Post-High School Experiences. We noted that occupational aspirations are highest among those who eventually attained the most education. As Figure 8-1 indicates, this relationship is very consistent across time--the differences in aspirations were just as large during high school as five years later, after the different levels of education had been attained. Of course, those who later reached high levels of educational attainment were in most cases planning for college throughout high school; and the correlations between college plans and occupational aspirations measured at the same point in time are consistently about .5 or higher (see Appendix G). Shall we conclude from this that the relationship between educational attainment and occupational aspirations at the end of the study are simply reflections of differences which already existed in high school? We think such a conclusion would be not entirely accurate. Some changes in aspirations do occur between age 15 and age 23. And while plans for college at Time 1 correlate .59 with occupational aspirations at that time, the correlation between Time 1 college plans and Time 5 status of aspired occupation is only .37. The fact that the differences shown in Figure 8-1 remain consistent throughout the study indicates that actual educational attainment does play some role in maintaining high occupational aspirations. This conclusion is supported by the results of a multiple regression analysis in which Time 5 occupational aspirations were predicted from background, ability, earlier occupational aspirations (Times 1, 2 and 3), and educational attainment. The standardized regression coefficient for educational attainment is a very substantial .33, indicating that it does make an important direct contribution to aspirations at Time 5.

Occupational aspirations are also high among those actually holding high status jobs at Time 5. Moreover, as Figure 8-2 indicates, these differences in aspirations were only partly in evidence at the start of the study. Thus we have here a clearer and less complicated instance of an effect of post-high school experience--those who had attained the highest status jobs at Time 5 showed little change in occupational aspirations, whereas those with the lowest actual job attainments showed some decrease in aspirations. A multiple regression analysis in which Time 5 occupational aspirations were predicted from background, ability, earlier occupational aspirations, and Time 5 occupational status confirms this conclusion; the standardized regression coefficient for Time 5 occupational status is .29.

Another multiple regression analysis was carried out in which Time 5 occupational aspirations were predicted from both educational attainment and occupational status at Time 5, with other predictors including background, ability and earlier occupational aspirations. The standardized regression coefficients were .24 for Time 5 occupational status and .25 for educational attainment. This suggests that each of these post-high school experiences plays a substantial role in shaping occupational aspirations five years after high school.

When we turn to job attitudes the links with post-high school experiences become much more complicated. As a number of the tables and figures presented in this chapter indicate, those who eventually attained different levels of education or job status showed larger differences in job attitudes at the start of the study than at the end; moreover, the direction of the differences is often reversed. We are frankly at a loss as to whether to attribute these changes to the impact of college, or the impact of being in a non-college (usually work) environment, or other more general phenomena of non-college youth "catching up" with those in college. Moreover, we cannot be sure whether what we have observed here for a cohort of young men studied in the late sixties and early seventies would be replicated among young people a decade later. The limitations of a single cohort

longitudinal design, discussed in Chapter 5, continue to haunt us. What we can say is that for this cohort of young men, those who attained less education began the study with less ambitious job attitudes than those with higher eventual educational attainments, but by five years after high school they had closed, and to some degree reversed, this gap. At this point, nearly everyone wanted a good job and seemed willing to work hard if that is what the job required.

CHAPTER 9

DELINQUENT BEHAVIOR AND DRUG USE

This chapter is concerned with behaviors, many of which are illegal and most of which are widely disapproved.¹ These behaviors have several things in common with the educational and occupational behaviors treated extensively in early chapters. First of all, delinquency and drug use, like educational and occupational attainment, are generally considered to be extremely important. If one were to survey the general public, or educators, or legislators, about vital problems facing the nation's youth, it is not clear whether the "negative" dimensions of delinquency and drug use would outweigh the potentially more "positive" dimensions of educational and occupational accomplishment. But surely both categories would rank near the top of the list. Moreover, it is widely believed that the two kinds of dimensions are interrelated--that educational and occupational success may offer an alternative or partial solution to delinquency and drug use.

A second factor that delinquency and drug use have in common with educational and occupational attainment is that they are actual events, and thus they can be reported relatively objectively. They do require some degree of accuracy in memory, and they also require considerable trust and candor in the survey situation. Nevertheless, this is a set of dimensions calling for reports of behaviors rather than attitudes or self-concepts; thus they may be a bit less susceptible to subtle "shading" of self-ratings in which factors such as academic ability may interact with the use of response scales.

One critical difference between the two sets of dimensions is that educational and occupational attainment can be measured meaningfully only some years following high school, after the attainments actually occur, whereas delinquent and drug use behaviors can be measured repeatedly--they can be studied in a meaningful way throughout high school (and earlier) as well as the years that follow high school. Thus these measures of delinquency and drug use provide our best opportunity in the present study to examine differences and changes in actual behaviors which may be linked to particular environments and experiences during and following the high school years.

As we shall see, some differences in post-high school experiences are correlated with rather stable differences in rates of delinquency or drug use--i.e., the differences in behavior were present during high school and thus pre-dated the post-high school events. We shall see other differences, however, which reflect different rates of change--and these more strongly suggest differential impacts of environments and experiences.

Validity of the Measures

The measures of delinquency and drug use, described a bit later in this chapter, are based on respondents' self-reports. Because of this, and particularly because the behaviors reported are often illegal and in some cases serious crimes, it is especially important to confront the question of validity. To what extent can we believe what our respondents have told us about their delinquent behaviors and their use of drugs? While we have no direct, objective validation of these measures, there exists considerable inferential evidence for their validity. Some of this evidence has been summarized by Johnston, O'Malley and Eveland (1977, pp. 14-15), and it is worth repeating here.

- (1) Well over 50% of the sample admit to some illegal behavior.
- (2) Although respondents were asked to leave the confidential items blank if they felt they could not answer them honestly, the percentage of missing data was essentially identical to that in the non-confidential sections of the questionnaire.
- (3) There are consistent and reasonable relationships between the drug use and delinquency items and other variables dealing with attitudes and behaviors.

- (4) A number of methodological studies (e.g., Petzel, Johnson, & McKillip, 1973) have included fictitious drugs in the questionnaires. Invariably these fictitious drugs show very low levels of reported use, indicating that intentional overreporting is not a problem.
- (5) The longitudinal nature of the present study precludes our providing anonymity to our respondents. This appears to make little difference for validity, however, since a number of studies have found no difference in reported drug use incidence among groups differing in anonymity (e.g., Leutgert & Armstrong, 1973; Haberman et al., 1972).
- (6) Studies similar to the present one have shown similar prevalence rates of drug use for the same age group (Abelson & Atkinson, 1975; O'Donnell, 1976).
- (7) Gold (1970) used peer reports to establish that 77% of the boys aged 13 to 16 in a study of delinquency were "truth-tellers." Another 11% were questionable, while 12% appeared to be concealing at least one offense.
- (8) Finally, considerable effort went into convincing the boys in the interview situations that their data were completely confidential. By 1974, the young men had been confiding in us for eight years already. It is difficult to believe that we would have observed as much stability in our data if there were large amounts of lying.

An additional kind of indirect evidence of validity, to be seen in the following pages, is the fact that the measures do relate in meaningful ways to a number of other dimensions, including objective events. The relationships do not confirm any hypotheses which might have been stated in advance; nevertheless, the patterns of findings are in most respects clear and plausible.

In the final analysis, such influences about validity become a matter of judgement, and the reader will have to decide whether the evidence is convincing. After considering the matter at some length, our own view is that the measures are basically valid.

Delinquent Behavior

Measures of Delinquency. Our measures were adapted directly from the work of Gold (1966). Three indexes of delinquency have proved to be particularly useful and are included in the present report: an eight-item measure of interpersonal aggression, a nine-item measure of theft and vandalism, and a ten-item composite measure of seriousness of delinquency (consisting of three interpersonal aggression items and seven theft and vandalism items). Table 9-1 lists the items grouped according to the index, and shows the percentages of respondents who admitted each behavior.

TABLE 9-1
Delinquency Items, Indexes, and Response Frequencies

<u>Interpersonal Aggression Index</u>	Percent of respondents who reported doing this one or more times during the period preceding:				
	Time 1 ^a	Time 2 ^a	Time 3 ^a	Time 4 ^a	Time 5 ^a
Hit an instructor or supervisor	8%	6%	4%	7%	2%
b Used a knife or gun or some other thing (like a club) to get something from a person	6	4	4	7	1
b Get something by telling a person something bad would happen to him if you did not get what you wanted	28	16	15	16	6
b Hurt someone badly enough to need bandages or a doctor	27	19	16	20	11
Taken part in a fight where a bunch of your friends are against another bunch	33	21	21	22	10
Gotten into a serious fight in school or at work	52	32	25	28	15
Hit your father	9	7	6	6	c
Hit your mother	6	5	3	3	c
<u>Theft and Vandalism Index</u>					
b Set fire to someone else's property on purpose	7	6	4	4	1
b Taken a car that didn't belong to someone in your family without permission of the owner	9	6	5	6	3
b Taken an expensive part of a car without permission of the owner	6	7	7	7	5
Damaged school property on purpose	25	19	1	18	4

	Time 1 ^a	Time 2 ^a	Time 3 ^a	Time 4 ^a	Time 5 ^a
b Taken an inexpensive part of a car without permission of the owner	11	10	10	12	6
b Taken something not belonging to you worth over \$50	10	9	9	11	7
Went onto someone's land or into some house or building when you weren't supposed to be there	66	48	47	53	28
b Taken something from a store without paying for it	50	36	34	41	24
b Taken something not belonging to you worth under \$50	46	37	39	45	35

^aReporting intervals were as follows: 3 years prior to Time 1, 18 months prior to Time 2, 12 or 18 months prior to Time 3, 12 months prior to Times 4 and 5 (see text for explanation). All percentages in this table are based on the total number of respondents available at each time (see paragraph of Footnote 2).

^bItem included in the Seriousness of Delinquency Index.

^cItem was not included in fifth data collection (see second paragraph of Footnote 2).

There are a number of complications in the delinquency measures which we have had to take into account in conducting our analyses and interpretations. Most important, there were several changes in the time interval for which retrospective reports of delinquent behaviors were obtained. The first data collection asked respondents, "Please tell us how many times you have done these things in the last three years--say since you started the seventh grade." At Time 2, eighteen months later, the instruction was changed to read, "Please tell us how many times you have done these things in the last 18 months--since we last talked with you." At Time 3, twelve months later, the same instruction was repeated. Due to an oversight, the time interval was not changed to twelve months (the interval since last we had talked with the respondents); thus we cannot be sure how many respondents were responding to the part of the instruction which said "the last 18 months" and how many were responding to the statement "since we last talked with you." At Times 4 and 5 the instructions simply asked respondents how often they had done each thing "during the past year." Needless to say, the use of several different time intervals for retrospective self-reports on delinquent behavior is an unfortunate flaw in our measurement of this important area. We cannot simply divide reported frequencies by the number of months involved, because we strongly suspect that the memories are sharpest during the first year (and also because the interval measured at Time 3 may have been interpreted as eighteen months by some respondents and twelve months by others). Based on the greater wisdom of hindsight, we should have picked a one-year interval for all of the delinquency reports. Fortunately, our primary focus in this chapter is on relational analyses rather than overall shifts in delinquency rates; therefore, the problems outlined above do not seriously limit our ability to draw conclusions from the data.

Several further complications in the delinquency measures include: a few item changes in the interpersonal aggression index; some limitations in reliabilities because each index deals with a limited number

of relatively rare events; and slight differences in delinquency rates depending upon whether the sample is restricted to those for whom delinquency data are available at all five time points. None of these complications, in our view, has seriously affected the basic findings and conclusions presented here; nevertheless, for those wishing to understand them more fully we have reviewed these problems in an extensive footnote.²

Change and Stability in Delinquency. As an examination of Table 9-1 would suggest, the three delinquency indexes all show an appreciable drop in scores from Time 1 to Time 2. The decline for interpersonal aggression is more than half a standard deviation; the shift for theft and vandalism is more than a quarter of a standard deviation; the drop for the seriousness index is about a fifth of a standard deviation. Recall that the Time 1 measure is actually a retrospective account of delinquent behavior during the three prior years, i.e., seventh, eighth and ninth grades; the Time 2 measure is an account of the preceding eighteen months, or most of tenth and eleventh grade. The difference in time intervals may have much to do with the shift in reported levels of delinquency, but there probably is also a real change reflected in the scores. In particular, the overall amount of interpersonal aggression reported for tenth and eleventh grades is well under half that reported for seventh through ninth grades. No doubt this reflects the changing norms and constraints which come into play as boys gain size and strength and become young men.

From Time 2 through Time 4, a reporting period spanning tenth grade through one year following high school, the average levels of reported delinquency remain roughly unchanged. But the annual rate of delinquency reported for the period between four and five years after high school (the year preceding Time 5) is one third or more lower on all three indexes. And in this case there is no difference in reporting interval that might be accounting for the shift; at both Time 4 and Time 5 the delinquency reports covered the past year. Not surprisingly, it appears that young men in their early twenties indulge in somewhat fewer delinquent

behaviors than when they were in their late teens.

We have just seen that overall rates of delinquency change during the span of more than ten years covered by our reports. But to what extent do relative rankings along the delinquency scales remain the same? To what extent are those who were most delinquent during junior high school also most delinquent in their early twenties? The actual correlations between Time 1 and Time 5 delinquency measures are not very high (a range from .26 to .28 for the three indexes). However, the pattern of the intercorrelations across time suggests that this may be the result of rather low reliabilities of the measures (reliability estimates ranging from .50 to .55), whereas their stability may compare favorably with many of the other measures. As the data in Appendix F indicate, the stability estimates for the delinquency measures are comparable to those for self-esteem--annual stability estimates are close to .9, and estimated stabilities from Time 1 to Time 5 are about .4.³

The Link to Educational Attainment. Along all three dimensions of delinquency there is a negative correlation with educational attainment--the higher the level of education a young man attains, the lower his level of delinquency. But this relationship, like a number of others that we have examined in previous chapters, does not point to education as the cause of the relationship. The differences in delinquency were evident from the start of the study. During junior high school those who would later become high school dropouts were involved in serious delinquency more than twice as often as those who would later become college graduates. The differences were even stronger along the scale of interpersonal aggression, as shown in Figure 9-1. Those who became dropouts had scores which averaged 0.82 at Time 1 compared with scores of 0.36 for those with a bachelor degree and 0.33 for those who continued their education beyond a bachelor degree. (The lowest possible index score is 0.00, indicating zero delinquent behavior; a score of 1.00 would indicate an average of one delinquent behavior in each of the categories. Thus, a score of 0.82 represents more than double the delinquency of a score of 0.36.)⁴

Figure 9-1 shows quite clearly the overall decline in interpersonal aggression scores that we discussed earlier. The more interesting aspect of the figure is the consistent ordering of educational attainment categories. Just as we found for self-esteem, the differences among educational attainment groups were just as clear at the start of the study as they were at the end. As a matter of fact, the absolute differences in amount of delinquency are a good deal larger for the Time 1 data (representing the period from seventh through ninth grades) than for the Time 4 data (representing the one-year period after most had graduated from high school); and the differences are smaller still for the Time 5 data (representing a one-year period roughly between age 22 and 23). But the differences in absolute amount of delinquency can be misleading, especially when we recall that different time intervals were involved. The variance in delinquency, like the absolute level, shows a decline over time. Thus, we find that the correlations between educational attainment and delinquency are fairly similar across all five points in time when delinquency was measured. For example, educational attainment (measured at the end of the study) shows product-moment correlations of $-.25$ with interpersonal aggression reported at Time 1, and $-.22$ with interpersonal aggression reported at Time 5. The corresponding figures are $-.12$ and $-.10$ for the theft and aggression index, and $-.16$ and $-.12$ for the composite seriousness of delinquency index. The correlations for delinquency measures at Times 2 through 4 are similar or slightly higher (see Appendix G).

The relationships between delinquency and educational attainment reported here are in many respects an elaboration of the findings reported in Volume III of the Youth in Transition monograph series (Bachman et al., 1971). The present data have extended our earlier findings along two dimensions. First, by adding another data collection we have extended the range of time sampled by four years; and we find that although the overall levels of delinquency have dropped, the pattern of differences is nearly as strong as it was earlier. Second, we can now make finer distinctions in educational attainment by separating

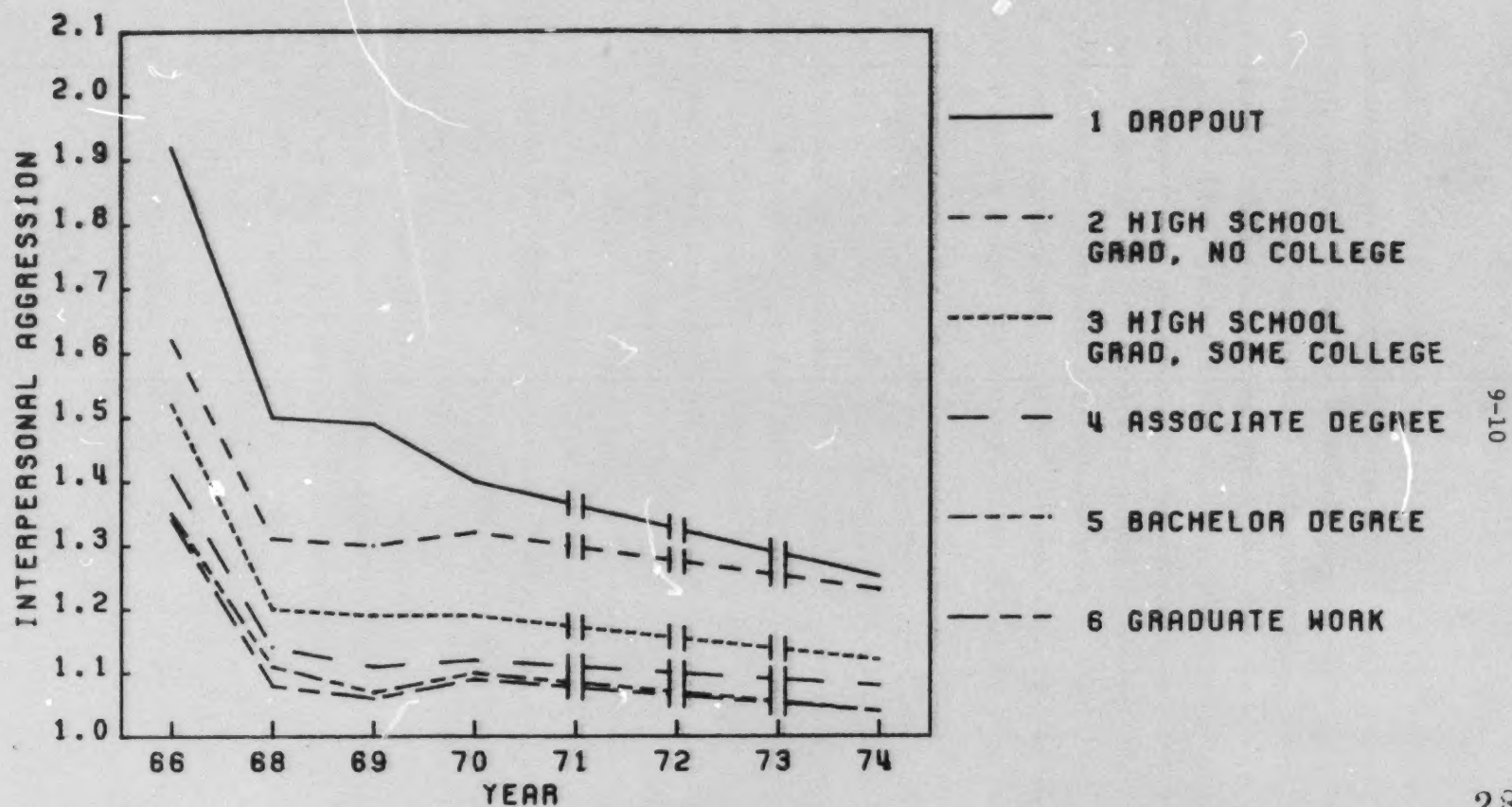


Figure 9-1. Interpersonal Aggression by Educational Attainment

different categories of college attenders and graduates. With this more refined measure of educational attainment than was possible at Time 4 (one year beyond high school), we see that there remains a very neat ordering in terms of delinquent behaviors. Each increment in educational attainment corresponds to a lower average level of delinquency.

As before, the high school dropout group stands sharply apart from the other groups--at least during the high school years. After high school (Times 4 and 5) this group is not so very different from those whose education ended with high school graduation. The point which must be stressed is that the higher delinquency does not follow on the heels of dropping out of high school. On the contrary, it is clearly in evidence during the junior high school years. These data fail to support the contention that high delinquency rates are a consequence of quitting school. Given the temporal sequence, it seems more likely that delinquency contributes to dropping out of school. This may be particularly true for delinquent behaviors in school, a dimension measured only in the first three data collections and reported in Volume III (Bachman et al., 1971). Still another explanation is that the "C causes both A and B" pattern of causation is heavily involved here: failure experiences in school lead to both delinquent behavior and (somewhat later when the young men reach or pass their sixteenth birthday) dropping out of school.⁵

Employment and Unemployment. Does being out of a job lead to increased levels of delinquency? We noted in Chapter 5 that unemployment, especially in the case of high school dropouts, seemed to have an impact on self-esteem. In order to explore the possible impact of employment versus unemployment on delinquency, we undertook a set of analyses dealing only with those in the civilian work force, excluding those who at Time 5 were primarily students or in the armed forces. At Time 5 the unemployed respondents reported levels of interpersonal aggression twice as high as the levels for the unemployed; levels of theft and vandalism were about 60 percent higher for the unemployed; and on the composite measure of seriousness of delinquency the unemployed

were about 65 percent higher than the employed (all differences statistically significant beyond the .01 level). Along each of these dimensions there were also differences in the Time 1 through Time 4 scores for those who later were employed and unemployed--in each case the delinquency scores averaged somewhat higher among those who turned out to be unemployed at Time 5. The relationship for the interpersonal aggression index is displayed in Figure 9-2. As the figure indicates, the differences in interpersonal aggression grew larger from Time 1 through Time 5. But the figure also indicates that distinct differences existed by the end of high school (Time 3); thus it cannot be said that the differences which appear at the end of the study were due solely to unemployment.

In our efforts to understand the linkages between unemployment and delinquency, it may be useful to recall that high school dropouts are more heavily unemployed and are also relatively high in delinquency. Perhaps the impact of unemployment on delinquency is particularly severe among dropouts. To explore this possibility, we repeated the analyses of employment and delinquency separately for dropouts, high school graduates, and those with varying amounts of college. The results for interpersonal aggression, although based on very small numbers of cases, are provocative. Among high school graduates the aggression levels at Time 5 are almost twice as high for the unemployed as for the employed. The differences are much smaller for those with some college or with bachelor degrees. But it is among the high school dropouts that the differences are most striking: the unemployed reported interpersonal aggression levels at Time 5 fully three times as large as those reported by employed dropouts. Had these results appeared only for the Time 5 interpersonal aggression data, it would be more convincing evidence of an impact of unemployment. However, by Time 4 there was already a two-to-one difference in interpersonal aggression. (It may be, of course, that these same dropouts were having difficulty obtaining employment at earlier points in time, and that this was contributing to their higher levels of aggression at Time 4.)

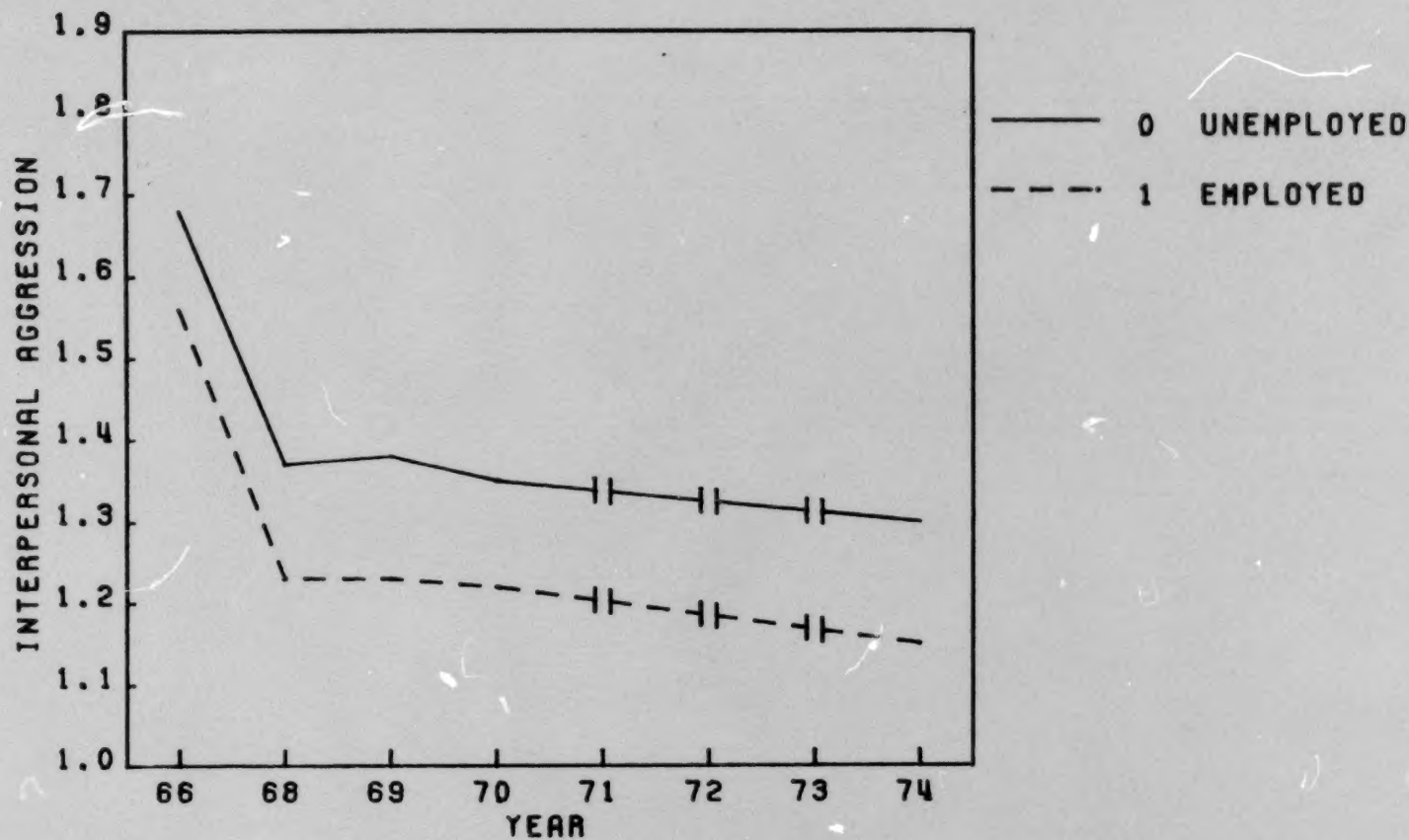


Figure 9-2. Interpersonal Aggression by Employment Status

It is important that we keep these findings in perspective. Most of the high school dropouts were not unemployed at Time 5. And, looking at the relationship from the other side, most of those unemployed at Time 5 had graduated from high school (and many had at least some college). Thus the relationship between unemployment and interpersonal aggression is not due solely, or even primarily, to the relatively small group of unemployed dropouts. It is just that the effect seems particularly strong among them. A similar effect was not in evidence when we examined the theft and vandalism scale or the composite measure of seriousness of delinquency. Those dropouts who were unemployed at Time 5 scored very slightly higher than those who were employed, but these differences were present more or less consistently from the junior high school years (measured at Time 1) through high school and the years that followed.

We will return to the relationship between unemployment and delinquency in the section on multivariate analyses. To sum up our findings thus far, it appears that the two dimensions are indeed related and that the relationship is not altogether simple or straightforward. Those who in the ranks of the unemployed at Time 5 began the study with slightly higher levels of delinquency, but those differences increased and were fairly substantial at the end of the study. The relationship is strongest for the measure of interpersonal aggression. That relationship, in turn, is particularly pronounced among high school dropouts. We thus have another interesting bit of data about that group of unemployed dropouts: they have the highest average level of interpersonal aggression as well as the lowest average level of self-esteem (see Chapter 5).

Job Status. The relationship between job status (at Time 5) and the delinquency measures can be summarized fairly easily. Those with a history of greater delinquency tend to have lower status jobs at the end of the study. The relationship is not strong, but it is consistent for all three delinquency scales across all five time intervals: the product-moment correlations for delinquency measured at Time 1 range

from $-.10$ to $-.13$; those for delinquency measured at Time 5 range from $-.09$ to $-.11$; and those for Times 2, 3 and 4 range from $-.11$ to $-.14$, plus one value of $-.17$ (see Appendix G for the complete set of correlations).

This rather small relationship, which shows delinquency differences just as strong at the start of the study as at the end, does not suggest that high status jobs lead to lower delinquency. Nor does it suggest very strongly that delinquency is a direct cause of job status, since educational attainment (also correlated with delinquency) is a far more powerful determinant of job status. On the contrary, the pattern of correlational findings, as well as the multivariate analyses summarized below, can best be interpreted as another instance of "C causes both A and B." Job status and delinquency appear to be modestly correlated because they are both linked to other prior factors, including those factors which lead to different levels of educational attainment.

Marriage and Parenthood. An examination of the delinquency levels of those who were single (at Time 5), those who were married without children, and those who were married with children, revealed an interesting and rather unusual pattern of relationships. Here, as in most of the analyses summarized above, the index of interpersonal aggression shows the strongest associations; they are displayed in Figure 9-3. Throughout the first four data collections, which report delinquency from seventh grade through the first year beyond high school, we see that those young men who married and became parents before age 23 had been consistently higher in interpersonal aggression--often nearly twice as high. By the end of the study, however, the difference had largely disappeared. The pattern of differences is similar, though not as strong for the index of theft and vandalism, and the composite measure of seriousness.⁶

What shall we make of the findings in Figure 9-3? On the face of it, it would seem that those who marry and become fathers (not necessarily in that order) at a relatively early age tend to be those

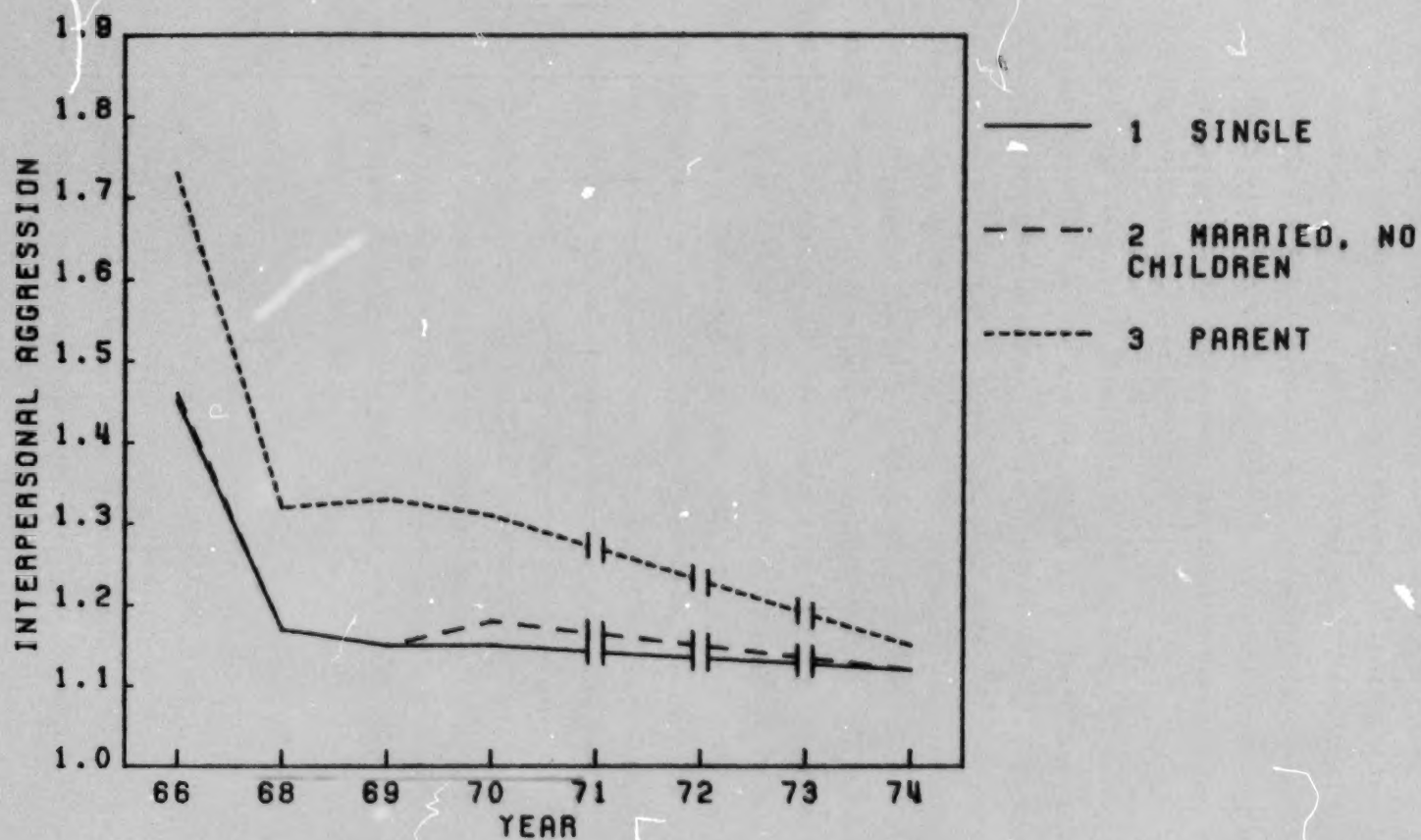


Figure 9-3. Interpersonal Aggression by Marital/Parental Status

with somewhat above average levels of interpersonal aggression throughout junior and senior high school. But four to five years beyond high school they are not much more aggressive than their age-mates. Is this simply because most young men become less aggressive when they reach their early twenties and thus the differences are attenuated? That interpretation does not square well with our findings for unemployment or even for educational attainment; although aggressive behaviors show an overall decline, the distinctions linked to education or unemployment tend to remain fairly strong. An alternative explanation of the findings in Figure 9-3 is that marriage and parenthood contributes to some extent to the "reform" of previously aggressive individuals. We have seen that unemployment is low among those young men who are married and have children. Perhaps that level of responsibility also contributes to a reduction in overt aggression. As we shall see later in this chapter, there are some very interesting differences in drug use among married versus single men that are consistent with this interpretation.

Multivariate Analyses Relating to Delinquency. A series of multiple regression analyses were carried out following the general approach introduced in Chapter 5 and employed in other chapters also. It quickly became apparent that controls for family socioeconomic level, number of siblings, and academic ability would be of little value in dealing with the delinquency measures. The zero-order product-moment correlations between these dimensions and the Time 5 theft and vandalism index range from $-.02$ to $.02$, and for the Time 5 seriousness of delinquency measure the range is from $-.05$ to $.02$. The correlations with the interpersonal aggression index are also small, but not entirely trivial. Time 5 interpersonal aggression correlates $-.09$ with family socioeconomic level, $.06$ with number of siblings, and $-.16$ with academic ability. The earlier measures of delinquency, especially those at Time 3, show somewhat stronger relationships with the background and ability measures; the most prominent instance is the correlation of $-.29$ between academic ability and interpersonal

aggression reported at Time 3. (See Appendix G for the complete listing of correlations.) It remains true, however, that once the Time 1, 2 and 3 versions of any of the delinquency measures is entered into the regression equation, there is no gain whatever in predictive power as a result of including the background and ability dimensions. (In most instances the adjusted multiple correlation is actually a tiny bit lower, indicating that the background and ability measures add more "noise" than information.)

We can turn, then, to a simpler form of regression analysis in which we control only for the earlier (Time 1, 2 and 3) versions of the delinquency measure in order to examine the effect of a particular experience or environment. We conducted such analyses for our three most important predictors--educational attainment, job status, and employment. For each of the delinquency measures, we found that the standardized multiple regression coefficients (betas) for educational attainment and job status are much lower than the corresponding zero-order correlations. In other words, controlling earlier levels of delinquency greatly reduces the predictive power of educational attainment and job status. When these two predictors are included simultaneously in equations, along with the earlier levels of the delinquency measure in question, the contribution of job status is further reduced to statistical (as well as substantive) non-significance. We did not, however, find that controlling earlier levels of delinquency substantially reduces the predictive power of the employment/unemployment dimensions. The beta values are somewhat lower than the zero-order correlations, to be sure; but the difference is far less pronounced than is the case for the other two predictors.⁷

Our conclusions from this series of multivariate analyses are consistent with our earlier observations based on bivariate analyses of the delinquency measures at multiple points in time. It appears that the different levels of delinquent behaviors, especially interpersonal aggression, shown by those with different levels of educational attainment reflect deeply ingrained patterns of behavior that were

fully in evidence as early as junior high school. As Figure 9-1 clearly indicates, the differences in aggression levels were present just as much--a bit more, in fact--during the junior and senior high school years than during the later period after the respondents finished sorting themselves into different levels of educational attainment. The correlations between delinquency and job status are smaller and show the same pattern of consistency over time; we thus conclude that these correlations appear simply because job status is a weak proxy for educational attainment. Unemployment remains as an environmental experiential factor which may have some direct impact on aggression. But even here, as Figure 9-2 indicates, the differences in aggression are largely (though not entirely) in evidence during the high school years. On the whole, then, we conclude that the delinquency differences linked to educational and occupational circumstances at Time 5 are largely a reflection of long-standing patterns and not the result of the specific post-high school experiences we have been examining.

Use of Cigarettes, Alcohol, Marijuana, and Other Drugs

The Youth in Transition project did not set out to treat drug use as an outcome or criterion measure. But by the late sixties it became clear that this was an area of great importance to youth and of great concern to society in general. Therefore, we included in our fourth and fifth data collections a number of questions about the use of illegal drugs, and also about the use of alcohol and cigarettes. An extensive analysis of the drug information from the fourth data collection has been completed by Johnston (1973), and an analysis of the drug material from the fifth data collection is being carried out presently by Johnston and his colleagues. In particular, an analysis of the interrelationships between delinquency behavior and drug use has already been completed by Johnston, O'Malley and Eveland (1976), and their conclusions based on that analysis are worth quoting extensively here.

What, then, do we conclude from all of this? First, we do not conclude that drug use does not lead to crime, since one very important type of use--the "addict"--is not sufficiently represented in this sample to be investigated. While our data would tend to suggest that the type of person who progresses through drug use to the point of heroin use is likely to be a substantially more criminal person than average, even before drug use, it seems quite likely to us that many addicts increase their levels of crime to support their habits.

We would also not want to suggest that alcohol, while it was not under investigation in the present paper but which is certainly a drug, does not lead to criminal behavior. Other investigators have developed evidence that suggest that alcohol may indeed be a contributing factor in assaultive crime (Tinklenberg, 1975).

What we do conclude from these explorations is that non-addictive use of illicit drugs does not seem to play much of a role in leading users to become the more delinquent persons we know them to be on the average. The reverse type of causation seems considerably more plausible, i.e. that delinquency leads to drug use. For example, we think it quite possible that delinquents who, because of their delinquency, became part of a deviant peer group are more likely to become drug users, since drug use is likely to be one approved behavior in such a peer group. We also suspect that the correlation between delinquency and drug use stems not only from such environmental factors, but also from individual differences in personality. Both delinquency and drug use are deviant behaviors and therefore both are more likely to be adopted by individuals who are prone toward deviance than by those who are not. The fact that other forms of delinquency tended to precede drug use (at least in this cohort) may simply reflect the fact that proneness toward deviance is expressed through different behaviors at different ages. Further, for this cohort the notion of using illicit drugs at all was just rising to consciousness among these young people as they passed through high school. Studies of a more recent class cohort would undoubtedly show less precedence of drug use by other forms of delinquency, since the average age of first drug use has declined markedly. (Johnston et al., 1976, pp. 33-34.)

Given that extensive analyses of the drug use data from the Youth in Transition study are already underway, our purpose in the present study is appropriately limited to a few key drug use dimensions and the ways in which they relate to, and perhaps reflect the impact of, different post-high school environments and experiences. In carrying out and interpreting the present analyses, we will keep in mind the cautions

about causal interpretations of drug use data that were quoted above.

Measures of Drug Use. In the fourth data collection (spring of 1974), approximately one year after most respondents had graduated from high school, a set of drug use questions was included in the questionnaire immediately following the delinquency items. The special instructions for delinquency items that stressed confidentiality thus applied also to the drug use items. The drug questions first asked respondents to report how often they had used each of a number of substances ". . . during part of all of the last year for other than medical reasons." The response scale ranged from "Nearly every day" to "Never." The questions covered use of cigarettes, alcohol, marijuana, amphetamines, barbiturates, hallucinogens (e.g., LSD), and heroin. (The phrase "for other than medical reasons" was included so that any reported use of amphetamines or barbiturates would be illicit use.)

The time interval covered by the first set of questions corresponded to the year after high school for most--approximately the summer of 1969 through the spring of 1970. A second set of questions was identical to the first, except that the questions asked about the period "previous to this past year (that is, before last summer). . ." These questions are more retrospective than the others, and that would ordinarily make them suspect; however, we are dealing here with events that have clear social and psychological significance for most respondents, and also with a time interval that for most is easily demarcated--the period preceding high school graduation. We agree with Johnston et al. (1976, p. 7) that this set of questions:

. . . probably provides a reasonable estimate of drug use during the senior year, although it does not ask about that specific period. Insofar as some subjects may have stopped using certain drugs before reaching their senior year, it may actually over-state the annual prevalence figures. However, earlier analyses (Johnston, 1973, pp. 42-44) suggested that very few users stopped using drugs in the year after graduating from high school, and it seems reasonable to conclude, at least for the high school class of 1969, that very few decreased their illicit drug use prior to graduation, either.

Nevertheless, it may be useful to keep in mind that our figures for drug usage that we have labeled 1968-69 actually represent upper limits.

The fifth data collection (spring and summer of 1974) included a repeat of the first set of drug items used in the preceding survey--i.e., the questions asked about use ". . . during part or all of the last year. . . ."8

Given the measures outlined above, we will be dealing with three one-year intervals that can be defined approximately as follows: 1968-69, for most respondents the senior year of high school; 1969-70, the first year following high school; 1973-74, the fifth year following high school (and for some, the first year following college).

We will look separately at use of cigarettes (on a daily basis), use of alcohol, use of marijuana, and use of other (illicit) drugs. As we shall see, there are some similarities but also some differences among these four categories of substance use as they relate to post-high school experiences; thus it seemed useful to treat each separately in analyses. On the other hand, we did not find it useful for our present purposes to make distinctions among the illicit drugs other than marijuana. There are great differences, to be sure, between the use of, say, amphetamines and heroin. However, the use of heroin is so rare as to be of little value in our present analyses. Instead, we will use an index which simply takes a mean of responses to the questions about amphetamines, barbiturates, and hallucinogens. For convenience we will sometimes use the abbreviation A/B/LSD to refer to this composite measure of the use of amphetamines (A), barbiturates (B), and hallucinogens (LSD). We did not include heroin use in this composite because it is so rare in our sample, and also because the few heroin users are also relatively heavy users of the other drugs and are thus already given a high score on the A/B/LSD measure.

Change and Stability in Drug Use. Not surprisingly, we find that the usage levels for all the substances we examined increased from 1968-69 (for most, the senior year in high school) to 1969-70,

and then showed a further increase by 1973-74. The usage rates for these three periods, summarized in Table 9-2, show that daily cigarette use increased somewhat, while weekly alcohol use nearly doubled. The proportion reporting any use (during the year) of amphetamines, barbiturates or hallucinogens doubled; and the proportion reporting any use of marijuana more than doubled, rising from one fifth of the sample during the senior year of high school to just over half of the sample five year later.

TABLE 9-2

Changes in Usage Rates for Cigarettes, Alcohol, Marijuana, and Other Drugs

	Percentage of Respondents ^a Reporting Usage During the Period:		
	1968-69	1969-70	1973-74
Daily use of cigarettes	35%	40%	44%
Weekly use of alcohol	31	44	58
Any use of marijuana	21	35	52
Any use of amphetamines, barbiturates, hallucinogens	12	18	24

^aThis table is based on only those respondents who participated in both the fourth and the fifth data collections. The number of cases on which each percentage is based varies (due to missing data) from 1357 to 1405. Footnote 9 presents the rationale for this restriction of the sample.

The estimates of stability and reliability for these measures, detailed in Appendix F, indicate that these dimensions have been measured fairly reliably. On the other hand, the stability estimates are relatively low, except for cigarette use. These stability estimates are quite understandable if we refer again to Table 9-2. There is only a nine percent increase in cigarette users; so if we take into account the fact that there are relatively few quitters, it means that the vast majority of respondents were doing the same thing (either smoking daily or not) in 1973-74 as in 1968-69. And that means that the stability of this measure is quite high. For each of the other three dimensions, however, there is a dramatic shift in overall levels of usage--many individuals increased their use of alcohol, and many who had not used marijuana or other drugs in 1968-69 used them at least experimentally in 1973-74. And that means low stability.

Given that usage rates for alcohol, marijuana, and other drugs seem to have changed substantially during the span we measured, these measures may represent an especially promising area in which to look for differential changes that are linked to post-high school environments and experiences. Cigarette use, by way of contrast, is likely to show less in the way of differential patterns of change.

Educational Attainment. The largest difference between those who go to college and those who do not lies not in the use of alcohol or marijuana or other illicit drugs. On the contrary, the really big difference linked to educational attainment is in the daily use of cigarettes. As Figure 9-4 indicates, by Time 5 about three out of four dropouts reported daily cigarette smoking, whereas the rate for those who went on to graduate work after college was one out of seven. And each of the other educational attainment subgroups is neatly ordered in between--the higher the level of education attained, the lower the proportion of smokers.

Could this lowered frequency of smoking among the better educated be primarily a result of their additional schooling? Figure 9-4 suggests it is not, since the differences were clearly in evidence

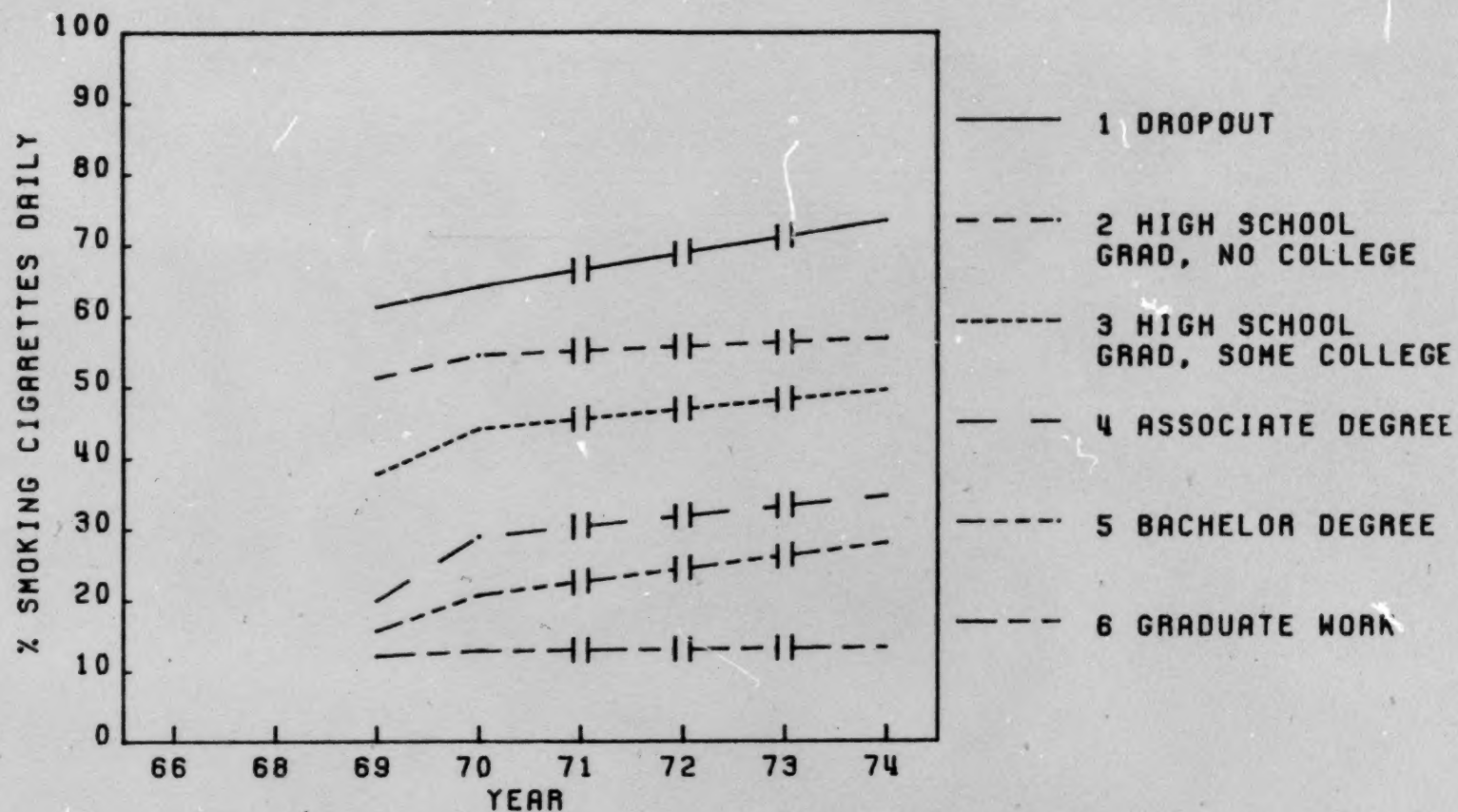


Figure 9-4. Cigarette Smoking by Educational Attainment

by the senior year of high school. Although smoking rates showed an overall rise during the five years following high school, the correlation between daily smoking and educational attainment remained virtually unchanged; the correlation is $-.32$ between smoking in 1968-69 and educational attainment, and the correlations for the subsequent smoking periods are $-.31$ and $-.30$. This does not mean that further schooling has no effect on smoking rates; it would be more accurate to say that additional education seems to have the effect of maintaining the differences which were present by the time most were seniors in high school.¹⁰

One more positive indication of possible educational impact is that cigarette use in 1973-74 shows a negative correlation ($r = -.17$) with college quality--the higher the status of the college or university a young man attended, the less likely he is to be a daily smoker. Here again we find that the relationship is anticipated by smoking rates during high school--those headed toward the higher status colleges were less likely to be smokers during their senior year--but the correlation is not as strong ($r = -.11$).

We conclude that post-high school educational experiences may have some marginal impact on cigarette smoking, but it appears that if we are to account for most of the relationship between smoking and educational attainment we must seek earlier causes.

One possibility is that the family background and ability dimensions which relate to educational attainment are important determinants of smoking behavior. An examination of product-moment correlations (see Appendix G) shows that neither ability nor socioeconomic level nor number of siblings correlates more strongly than $-.12$ with smoking, and using all three variables in a multiple regression equation produces an (adjusted) R of only $.14$. A more promising possibility is that earlier educational success, which related strongly to later educational attainment (see Chapter 2), is also correlated with smoking behavior by the senior year of high school. One such measure of early educational success, classroom grades, does indeed correlate with senior year smoking; the correlation is $-.25$ when predicting from ninth grade

grades (reported at Time 1), and for later measures of grades the correlations are $-.26$. (The other indicators of earlier educational success or failure, such as being held back a grade, show much weaker correlations with smoking.)

The fact that smoking is much less frequent among young men who got good grades in junior and senior high school, and then went on to college, does not provide us with a clear explanation as to why their smoking rates are lower, but it does suggest one strong possibility. During the last decade there has been increasing evidence, widely reported in the media, pointing to the health hazards involved in smoking. It seems likely that those young men who are more successful in school are probably also the ones most likely to read and seriously evaluate such reports on the dangers of cigarette smoking. It is worth noting in this connection that a more recent study, dealing with the high school class of 1975, has shown a positive correlation ($r = .19$) between classroom grades and ratings of the amount of harm likely to be caused by smoking one or more packs of cigarettes per day.¹¹

Turning next to alcohol use, we find that once again the educational attainment groups were different by the time they reached the senior year of high school. But in this case, the differences diminish during the next five years. The findings are displayed in Figure 9-5. Those who completed college (including the group which went on to graduate study) had the lowest rates of alcohol use at all times studied; in the senior year of high school just under 20 percent drank as often as once a week, but five years later the figure was about 50 percent. High school dropouts, by way of contrast showed nearly 50 percent drinking at least weekly as early as 1968-69, and by 1973-74 the rate was over 60 percent.

The differences in alcohol usage clearly are not attributable to educational attainment, since they were stronger during high school than afterward. Nor is there any appreciable correlation between alcohol use and family background or ability. As in the case of daily cigarette use, alcohol use during the senior year of high school shows negative

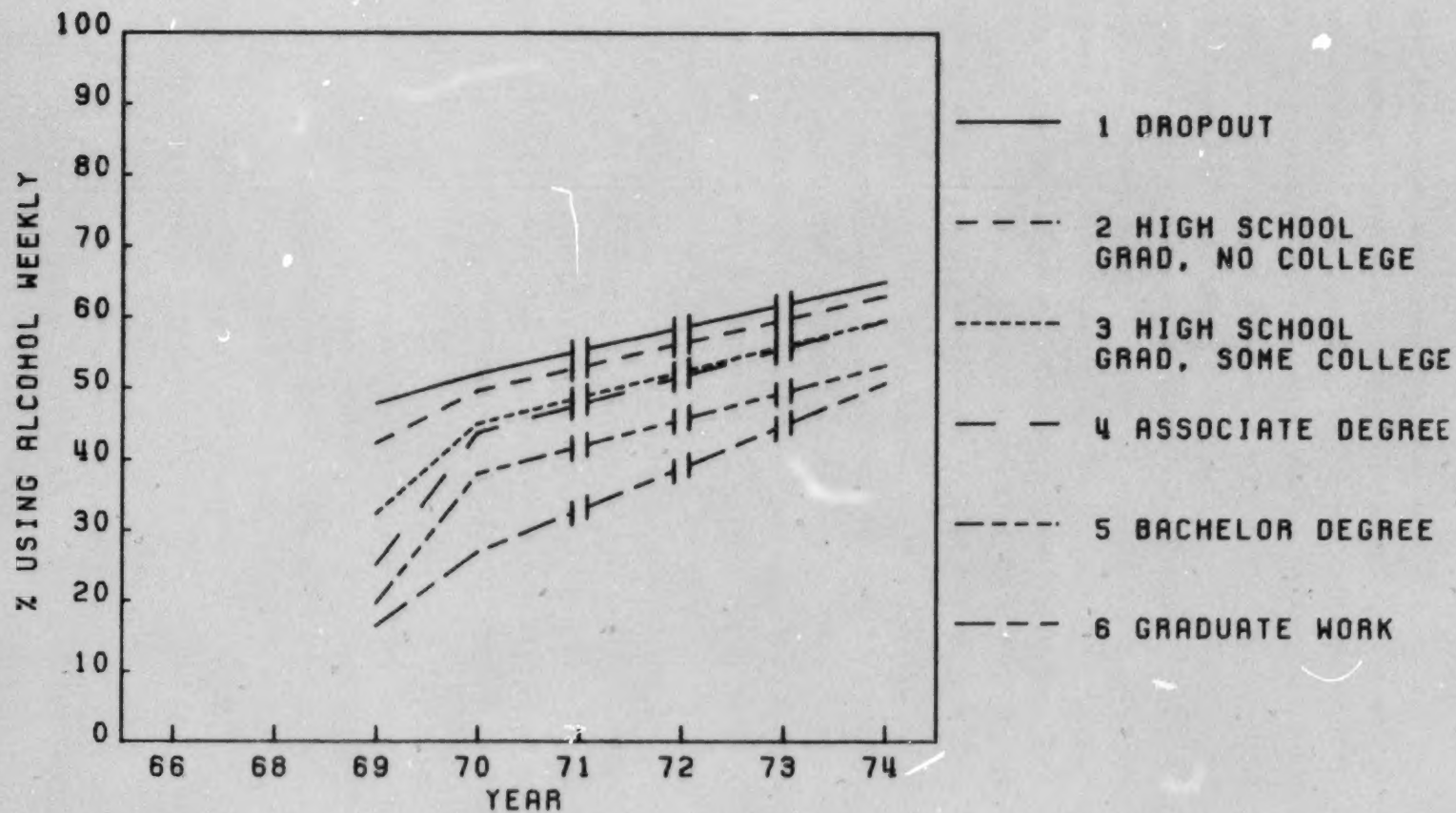


Figure 9-5. Alcohol Use by Educational Attainment

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relationships with grades ($r = -.18$ for grades in both ninth grade and twelfth grade) and with the status of the college eventually attended ($r = -.12$). Alcohol use during the senior year also shows fairly strong correlations with the measures of delinquent behavior (see Appendix G); thus, it may represent part of the syndrome of delinquent behavior that we have found to be consistently (throughout junior and senior high school) related to later educational attainment. Since for many of the respondents the use of alcohol in 1968-69 was illegal, something that was not the case by 1973-74 when they were in their early twenties, it is not surprising that the differentiation according to educational attainment is stronger in 1968 through 1970 than in 1973-74. Consistent with this explanation, the measure of alcohol use in 1973-74 is generally much less strongly correlated with the delinquency measures (see Appendix G).

When we turn to those substances which are strictly illegal, we find much less relationship with educational attainment. Marijuana use for the three time intervals measured correlates $-.09$, $.00$, and $-.05$ with educational attainment. The comparable correlations between educational attainment and the composite measure of amphetamine, barbiturate, and/or hallucinogen use are only slightly stronger: $-.12$, $-.09$, and $-.09$. The fact of simply going to college or not does not appear to bear much relationship to the use of illegal drugs (nor, for that matter, does the quality of the college attended).

College Major. If merely attending college or not seems to have little correlation with use of illegal drugs, the same cannot be said for the major program of study elected in college. Here we find some fairly substantial differences, although once again it seems likely that the drug use differences preceded the post-high school experience in question. Figure 9-6 presents the results for the use of marijuana. The outstanding group consists of those who became majors in the humanities and fine arts. Before they left high school, 44 percent of the young men in this category had tried marijuana--a figure twice as high as was found for any other college major group. During what was the first year of college for most (1969-70), 60 percent of the humanities

and arts group had used marijuana at least once, and the figure for social science majors had reached 50 percent. Four years later these two groups still led all others; 69 percent of the humanities and arts majors and 64 percent of the social science majors had used marijuana at least once during the year. The rest of the college major groups are much less differentiated. Those majoring in education (including elementary, physical, special, etc.) were the least likely to use marijuana at all three points in time; 37 percent of them reported having used marijuana at least once during the year 1973-74. The other four groups of college majors are crowded together so closely in Figure 9-6 that it may be difficult to distinguish one from another; the usage rates for 1973-74 among these groups ranged from 46 percent to 53 percent.

The findings for the amphetamine, barbiturate, hallucinogen composite measure are in some respects similar to the marijuana findings shown in Figure 9-6. Again, the humanities and arts majors have the highest rates of A/B/LSD usage: 26 percent, 36 percent, and 40 percent during the three time intervals (respectively). The other groups showed much lower usage rates during the senior year of high school, and five years later they still were lower than the humanities and arts majors. During that 1973-74 period, 31 percent of the social science majors and 28 percent of the biological science majors reported some use of A/B/LSD. The rest of the college major groups were clustered between 19 and 21 percent, except for the education majors--15 percent of them reported some A/B/LSD use during 1973-74.

The college major groups are not very different in use of cigarettes and alcohol. During the last year of high school 33 percent of those who became arts and humanities majors were daily smokers, a figure which rose to 39 percent five years later (1973-74). The other groups were all clustered together at about 35 percent daily smokers in 1973-74, except for those who majored in education (24 percent) and the physical sciences and math (20 percent). The differences in alcohol use are small and not worth reporting, except perhaps to mention that this is the one category of substance use in which the arts and humanities

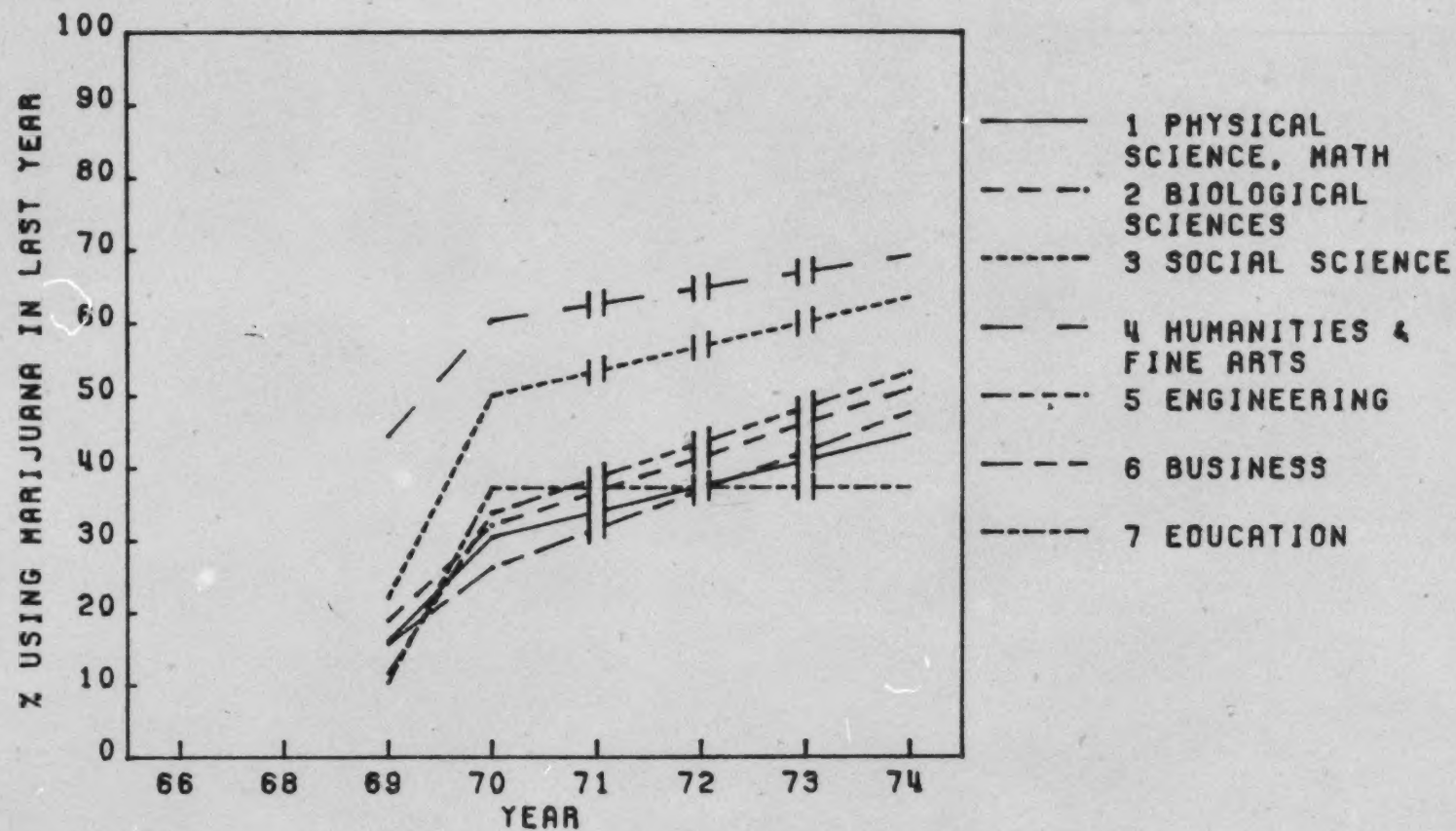


Figure 9-6. Marijuana Use by College Major

majors did not show the highest levels--they were second from the bottom, with only the education majors showing lower frequencies of weekly alcohol use.

Occupational Experiences. The two dimensions of occupational experience of interest to us here are job status and employment (versus unemployment). The correlations between these dimensions and our several measures of drug use are presented in Table 9-3. The correlations are all negative, but most are rather small. Alcohol use, in particular, shows little association with job status and virtually none with employment.

Cigarette use in 1973-74 shows a correlation of $-.16$ with job status, but this is simply a reflection of the stronger correlation between educational attainment and cigarette use. (When both educational attainment and job status are entered into a multiple regression analysis predicting 1973-74 cigarette use, the beta coefficient for job status is only $-.03$ whereas that for educational attainment is $-.26$.) There is a modest set of correlations indicating that those unemployed at Time 5 were more likely to be daily cigarette smokers during high school and beyond. In 1973-74 61 percent of those who were unemployed were daily smokers, compared with 45 percent of those employed in the civilian work force. But these two groups had been just about as different in their rates of smoking back in 1968-69--the figures then were 53 percent compared with 35 percent. Thus it hardly seems that unemployment increases the likelihood of becoming a daily smoker.

As Table 9-3 indicates, it is when we turn to the illegal drugs that we see somewhat stronger relationships with job status and particularly with employment/unemployment. In the case of job status, the correlations with both marijuana use and use of amphetamines/barbiturates/hallucinogens show a gradual rise over time: there is virtually no relationship between drug use in the senior year of high school (1968-69) and later job attainment, but at the end of the study (1973-74) we find somewhat higher usage rates among those with lower status jobs. The

TABLE 9-3

Job Status and Employment/Unemployment Correlated with
Use of Cigarettes, Alcohol, and Illicit Drugs

	Product-Moment Correlation with:	
	Job Status	Employment (vs. Unemployment)
Daily Cigarette Use		
1968-69	-.14	-.10
1969-70	-.14	-.05
1973-74	-.16	-.09
Alcohol Use		
1968-69	-.08	-.04
1969-70	-.06	-.01
1973-74	-.07	-.04
Marijuana Use		
1968-69	-.02	-.05
1969-70	-.04	-.10
1973-74	-.10	-.18
Use of Amphetamines, Barbiturates, and/or Hallucinogens		
1968-69	-.03	-.08
1969-70	-.08	-.06
1973-74	-.12	-.16

Note. These correlations are taken from Appendix G. The numbers of cases are larger than when analyses have been restricted to those who participated in both Time 5 and Time 4 data collections (a practice which has been employed in most of the special analyses conducted for this chapter).

employment/unemployment dimension shows the same pattern of increasing correlations from 1968-69 through 1973-74, but more strongly. The trend for marijuana use, presented graphically in Figure 9-7, is a much sharper rise in the proportion reporting any marijuana use among those unemployed at the end of the study, compared with those who were employed. The A/B/LSD dimension shows a very similar pattern: 46 percent of the unemployed group had used at least one of the drugs in 1973-74, compared with 22 percent of the employed; back in 1968-69 the rates were (respectively) 19 percent and 11 percent. In sum, while these findings do not prove that unemployment leads to increased drug use, since both may be caused by other factors, the data certainly are consistent with the argument that failure to find a job contributes to drug use.

Marriage. We noted earlier in this chapter that the young men who were married and parents before the 1974 data collection had been higher in interpersonal aggression during their high school years, but had shown a greater than average drop in aggression following high school (see Figure 9-3). We examined the drug use data for the same three groups--those who were single in 1974, those who were married without children, and those who had children. Our findings again suggest that marriage may have an effect of "toning down" the excesses of young men in their early twenties, in this case because the single men show greater increases in drug use than the married ones. The findings for marijuana use show the effect quite clearly, and are displayed in Figure 9-8. Note that the three analysis groups were quite similar during the last year of high school (1968-69), and in the first year following high school (1969-70); however, in 1973-74 about 60 percent of the single men used marijuana at least once, compared with about 40 percent of the married men. It is worth noting that one of the items included in the questionnaire in 1974 asked all respondents who were not currently using marijuana to check the reasons why; one of the frequently checked responses was "My wife or girlfriend would disapprove."

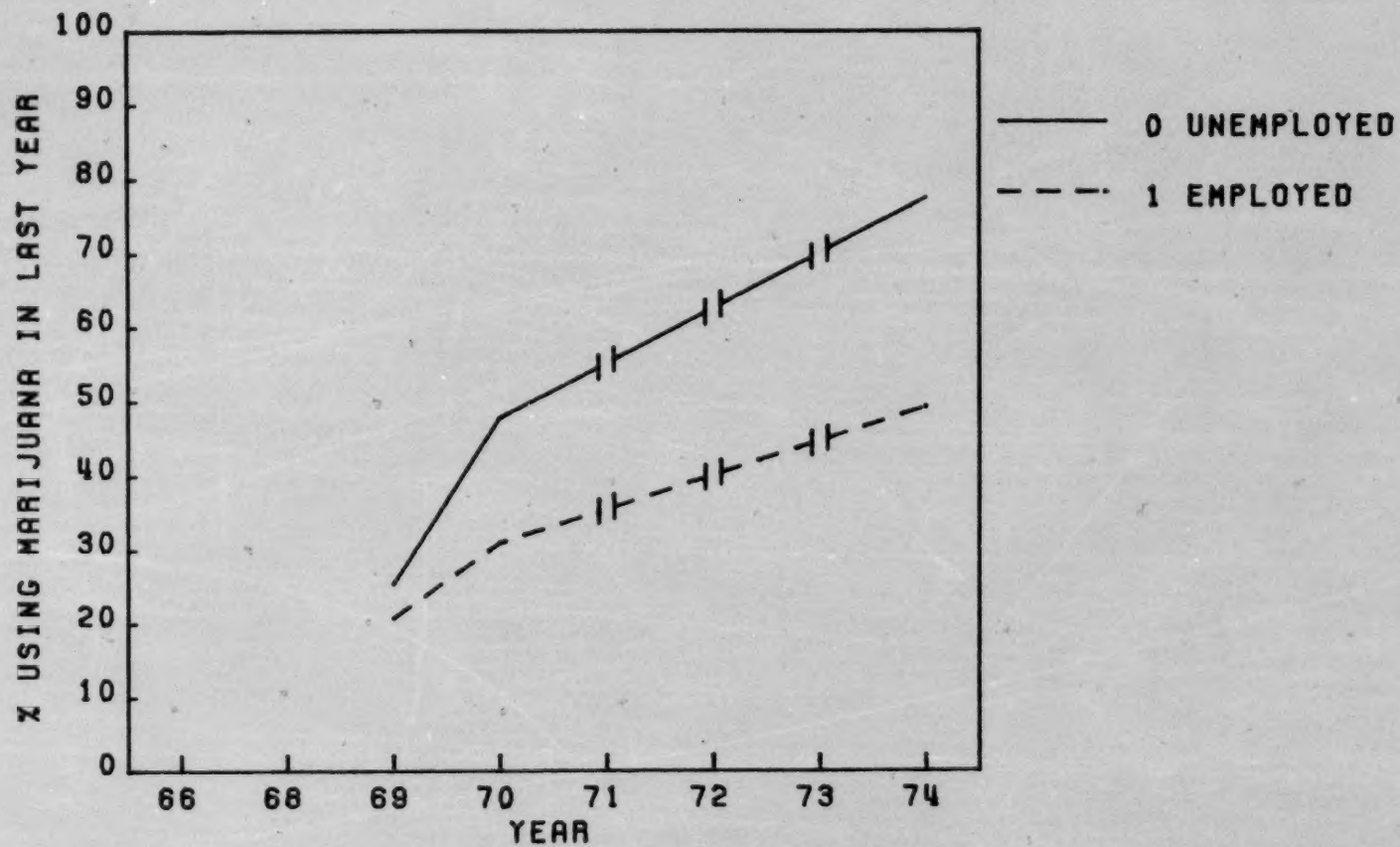


Figure 9-7. Marijuana Use by Employment Status

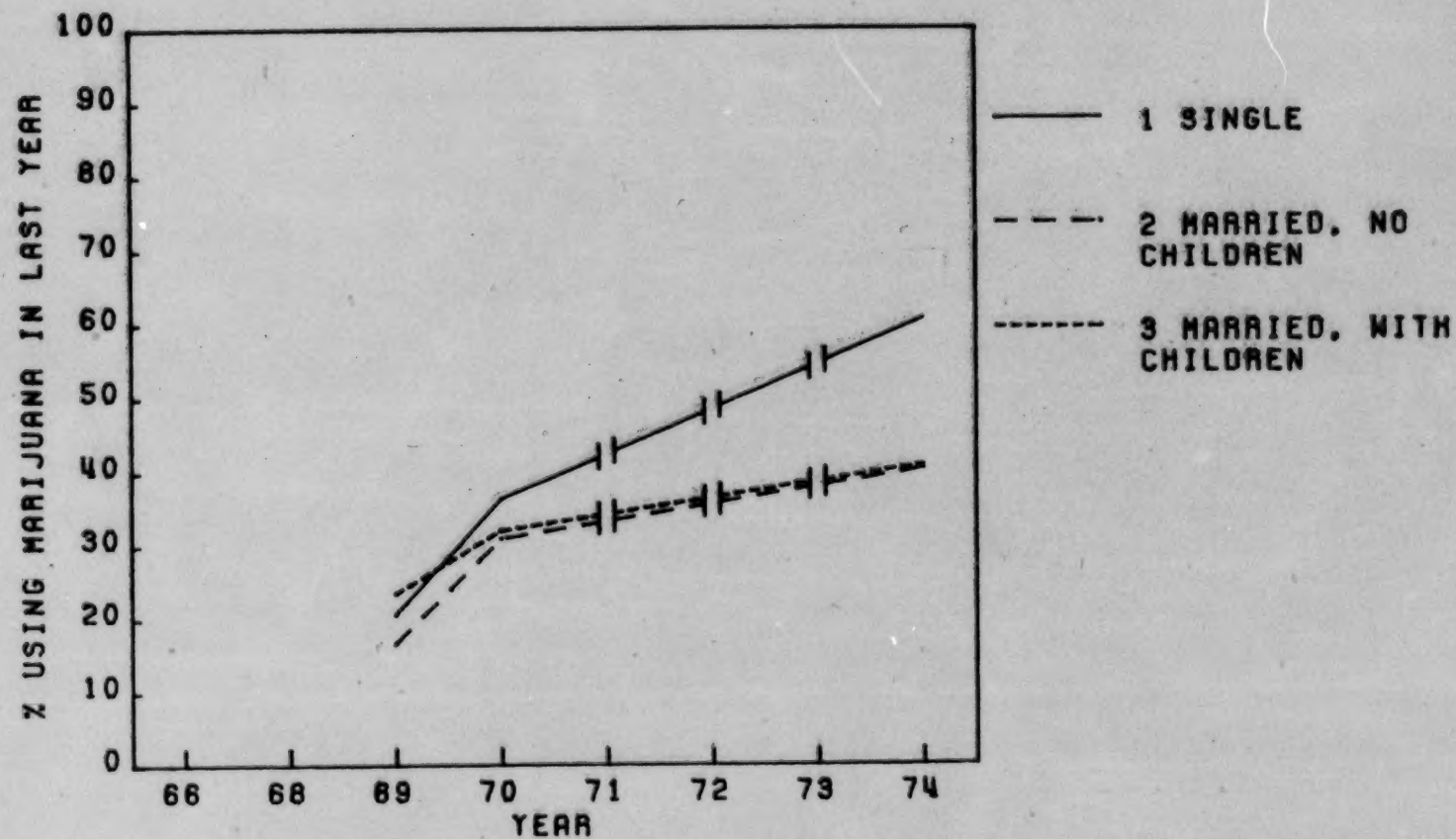


Figure 9-8. Marijuana Use by Marital/Parental Status

The difference between married and unmarried men appears also for the use of amphetamines, barbiturates, and/or hallucinogens. During the last year of high school the groups were very similar, and in the next year (1969-70) about 16 to 18 percent of each group reported at least some A/B/LSD use. But in 1973-74 the rate of use by married men (both parents and non-parents) remained at about 17 percent, whereas the rate for single men rose to 29 percent.

The findings for weekly alcohol use, shown in Figure 9-9, show a similar pattern of greater increases for the single men, although the three groups start from different base levels during the senior year of high school. The young men who were soon to become parents showed the highest percentage of weekly alcohol users during the last year of high school and the first year thereafter (1968-70). Those who were to remain single during the next five years showed the lowest percentage during the 1968-70 period. But during the interval from 1970 through 1974 the proportion of the single men who used alcohol at least once a week increased from less than 40 percent to more than 60 percent; during the same interval the proportions for the married men increased by only about 6 or 7 percent.

The findings for cigarette use show little differential change among groups. Those who were married and parents by about age 23 (1974) showed consistently higher proportions of daily cigarette users from high school onward: from 48 percent during the senior year to 55 percent five years later. The other two groups had about 30 percent daily smokers in the senior year and just under 40 percent five years later.

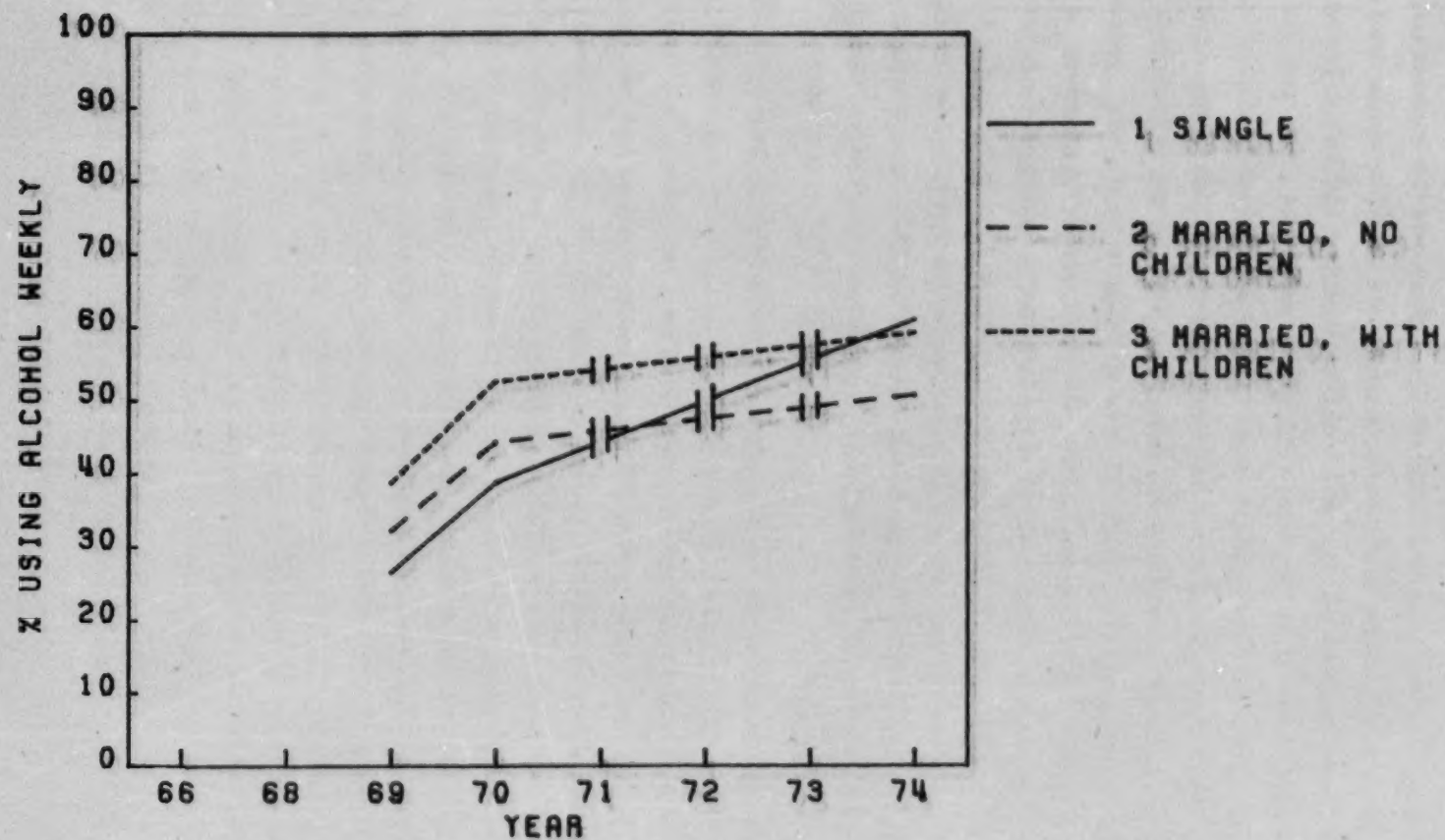


Figure 9-9. Alcohol Use by Marital/Parental Status

Footnotes

¹The data on delinquent behavior and drug use treated in this chapter have also been analyzed extensively by Johnston, O'Malley and Eveland (1976). In particular, their analysis concentrated on the relationship between drug use and delinquency. We will not treat those relationships here, but will cite their conclusions. We will also borrow extensively from their paper in describing the measures and the issue of validity.

²Several of the complications in the delinquency items occurred because we did not adequately anticipate the need for revisions in the delinquency measures as our respondents moved through high school and then into the post-high school years. (One reason for this is the fact that the Youth in Transition project was originally designed to have only three data collections, with the third one occurring shortly after the end of high school.) The original list of delinquent behaviors adapted from Gold's (1966) work included 26 delinquent behaviors. The list was shortened to 21 items at the fourth data collection in order to omit a number of school-specific items (none of which was included in the three indexes used in this report). Three more items were removed in the final data collection, two of which had been included in the interpersonal aggression index, as noted below.

A number of modifications were made in the interpersonal aggression index because some items became less appropriate in their original form. For the first three data collections the item "Hit an instructor or supervisor" had been worded "Hit a teacher," and the item "Gotten into a serious fight in school or at work" had not included the reference to work. Also, the items about hitting father or mother were not included in the last data collection (when the young men were at an average age of 23). An

examination of the frequency distributions of the two changed items suggests that the changes in wording making them less school-specific did not produce any important shift in responses. Omitting the two items about hitting a parent led to very little loss in information; by the fourth data collection (when the respondents were about nineteen) only six percent reported having hit their father during the last year, only three percent hit their mother, and there is good reason to think that four years later the percentages would have been still lower. (Not having these very low frequency items included in the index computation at Time 5 has the effect of making the interpersonal aggression scores higher than they would have been if the two items had been retained. In other words, omitting these two items has the effect of slightly underestimating the drop in interpersonal aggression from Time 4 to Time 5.)

The reliabilities of the delinquency indexes are estimated to be rather low -- a range from .50 to .55 (see Appendix F). One reason for these low levels of reliability has to do with the fact that the delinquency items deal with events which are fairly infrequent during the junior high school years and which become still less frequent during the years that follow (see Table 6-1). Because of this, a difference of one scale point on any one item (e.g., getting into a fight one time rather than not at all) would be sufficient to move an individual out of the majority category for interpersonal aggression at Time 5 (the majority reported no instances of any of the six behaviors measured). This means that our indexes, even though they are based on six to ten items each, make relatively crude distinctions among individuals, and this in turn means that reliability levels are decreased. If we wanted our measures of delinquency to have the same level of reliability as we attain with our ten-item index of self-esteem (in which re-

spondents make extensive use of at least three of the five scale points for each item) we would probably require fifty or more delinquency items. Fortunately, the comparison of different subgroups is not so seriously affected by the limited reliability of the delinquency measures, and such analyses are the primary focus of this chapter. The place where low reliability causes more serious problems is in multivariate analyses that attempt to assess change and causal impact by "controlling" earlier levels of delinquency. If delinquency is not very reliably measured, the "controls" provided by multiple regression analyses are not complete.

We noted in our discussion of the retention rates for our longitudinal panel that the Time 5 mailed questionnaire successfully reached some respondents who did not participate in earlier data collections, particularly the interview/questionnaire session at Time 4 (one year after high school). For most purposes, our strategy of limiting analyses to those who participated at Time 5 has not given us problems, even though the "middle" data collections and particularly the one at Time 4 have had higher proportions of missing data. In the present topic areas, however, the problems are a bit more noticeable. The delinquency levels of those who missed Time 4 but returned to the study at Time 5 were (at both the start of the study and the end) a bit higher than the levels for those who participated at both Time 4 and Time 5. The distortions are not really severe; nevertheless, we found it preferable for some analyses in this chapter to further restrict the sample to those who participated at both Time 4 and Time 5. (Incidentally, the same strategy was employed for some of the drug use analyses. In this case data were collected only at Time 4 and 5, so it was particularly appropriate in some analyses to limit ourselves to those respondents who participated on both occasions.)

Perhaps one other complication is worth noting here. The percentages reported in Table 9-1 are based on the total sample participating at each data collection, rather than only Time 5 (or Times 4 and 5) participants. This was unavoidable, because the data on individual items no longer exist for individual respondents (and thus it would be impossible to compute frequency distributions on each item for any particular subset of respondents). The individual item responses were destroyed, after initial frequency distributions were run and index scores were computed, in order to insure that no individual's report of any particular delinquent (and sometimes criminal) activity could be recovered from our data files. This lack of precise matching of respondents across time means that the frequencies presented in Table 9-1 must be viewed as only approximations. Nevertheless, the differences across time are quite substantial, whereas the biases introduced by sample shifts are very limited. Thus, the broad conclusions drawn from the table remain valid.

³ See the second paragraph in Footnote 2 for a further discussion of the reliability of these delinquency measures.

⁴ A word about the scoring and scaling of the delinquency indexes is in order here. Respondents were asked to report how often they had done each behavior using this five-point scale: Never (during the time interval in question); Once; Twice; 3 or 4 times. In this chapter we have in effect assigned values of 0 through 4 to these five scale points so that the resulting index is very close to a true ratio scale. Since very few (less than five percent) of the respondents gave higher values than "Twice" in answering most questions, we are comfortable with treating the delinquency measures as ratio scales. (It should be noted that the original calculation of the index scores resulted in a scale with a possible range from 100 through 500; this makes

no difference for the correlations reported here or in Appendix G, but it does lead to different mean and standard deviation values in that appendix. The figures reported in this chapter have simply been transformed into the 0 to 4 scale by subtracting 100 from the original index score and then dividing the remainder by 100.)

⁵This interpretation was suggested in a personal communication from our colleague Martin Gold.

⁶The complete set of correlations appears in Appendix G. Variable #11 is a dichotomy in which those who were parents at Time 5 were scored "1" and all others were scored "0."

⁷As we noted in Footnote 2, the reliability of the delinquency measures is unusually low and this presents special problems for multiple regression analyses. The lower reliabilities mean that the observed correlations between the early delinquency scores and the Time 5 scores are substantially lower than the "true" correlations. Thus, when we introduce these correlations into the multiple regression formula, we are only partly controlling earlier levels of delinquency. This results in an overstatement of the contribution of the other predictors such as educational attainment, job status, and unemployment. One way of attempting to solve this type of problem is to introduce adjustments for reliability. We have not chosen to carry these analyses to that level of complexity for several reasons, the most compelling of which is that even with the present inadequate controls the basic direction of the findings seems sufficiently clear.

⁸The fifth data collection, which was sponsored in part by the White House Special Action Office for Drug Abuse Prevention, included a considerable number of other questions about drugs (placed following the questions about use during the past year). These questions are not central to our present analyses, and will be treated at length elsewhere.

⁹In computing the percentages, and in most other analyses in this section we have followed the practice employed in our analyses of delinquent behavior, and have limited the sample to those who participated in both the Time 4 and Time 5 data collections (rather than simply limiting to those who participated at Time 5). The roughly two hundred individuals who missed the fourth data collection but participated in the fifth reported slightly higher usage rates than the rest of the Time 5 sample. By excluding them from the present analyses, we avoid an overestimate of the increases in drug use from Time 4 to Time 5, but we also very slightly underestimate the actual usage levels for the whole sample at Time 5. Since our emphasis is primarily on relational analyses and changes, this restriction in the sample seems appropriate. (It should be added that the correlational data included in Appendix G and used in our multivariate analyses were not restricted to those who participated at both Times 4 and 5.)

¹⁰In a multiple regression analysis predicting daily smoking in 1973-74, and using daily smoking in 1968-69 plus educational attainment as predictors, the beta values for the two predictors are (respectively) .59 and -.12. The beta value of -.12 for educational attainment after controlling for smoking level during high school is no doubt an overestimate of its true impact; the control for early smoking is limited by the fact that we used a dichotomous version of the cigarette smoking question at both time points, whereas if we had used the continuous version and/or if we had incorporated adjustments for unreliability the contribution of educational attainment in the multiple regression analysis would have been reduced.

¹¹This finding, not yet published, is based on the Monitoring the Future project currently being conducted at the Institute for Social Research.

CHAPTER 10

SUMMARY

This chapter presents a short overview of our findings. The research reported here has had several different but interrelated objectives. Accordingly, there have been several different strands of analysis. This chapter is intended to tie some of the strands together and make clearer the ways in which they are interrelated.

Educational Attainment as an Outcome

One objective of the research was to assess the degree to which education attained by age twenty-three is predictable from measures obtained at age fifteen. This is an important question because it indicates the degree to which one's eventual level of education--and therefore many other important aspects of one's life--is already "fixed" or "pre-determined" by tenth grade in high school.¹

We found that we could account for just over fifty percent of the variance in educational attainment by using the "best set" of predictors. These predictors include family socioeconomic level, number of siblings, intellectual ability, average ninth grade grades, college plans, negative school attitudes, delinquent behavior in school, curriculum, and grade failure. In other words, by knowing tenth grade family background, ability, and a few indicators of

success in school and attitudes toward schooling, we can do a rather good job of predicting eventual educational attainment.

Occupational Attainment

We also wished to know how well we could account for occupational attainments. Three different indicators of attainment were used: status, wages, and employment (versus unemployed). In looking at the predictors of occupational attainments, we used the set of virtually all the dimensions measured in 1966, and expanded it to include several 1974 measures of what we called environments and experiences. And we also included educational attainment. This last variable was of particular interest to us, since a primary purpose of this research was to explore the longer-range effects of dropping out of high school. The most important effects would presumably be those having to do with occupational outcomes.

Effect of Dropping Out

In looking at the effects of dropping out, it is very important to make the appropriate comparisons. We do not consider it appropriate simply to compare the dropouts with all others in the sample. All others include those who end their education with high school graduation, those who go on to attend college, and those who actually graduate from college. In most respects, dropouts are not very different from high school graduates who do not go on to college. But they are very different from those graduates who do enter college. In comparing the occupational outcomes of dropouts versus high school graduates, we looked at three measures: Duncan status of attained job,

hourly wage rates, and employment rates. We found virtually no deleterious effect of dropping out on the first two measures--dropouts had jobs with status and wages no lower than high school graduates. But there did seem to be an effect due to dropping out on the likelihood of employment. After adjusting for family socioeconomic level, number of siblings, and intellectual ability, the dropouts were still almost twice as likely as graduates to be unemployed. On a fourth dimension of occupational attainment, the subjective measure of job satisfaction, dropouts fared every bit as well as high school graduates.

Other Effects of Educational Attainment

Moving beyond the affect of dropping out of high school, we found that there was very little effect of level of attained education on the hourly wage rates of young men. This lack of effect is surely due to the fact that our sample was in the very early stages of their occupational careers. There were also few differences in employment rates associated with level of attained education. Excluding high school dropouts, the percentage of unemployed respondents was 7.5 percent. Perhaps more differences among the educational levels would have been evident if the unemployment rate were higher. Traditionally, it has been the less educated who have been most affected by increased rates of unemployment.

Unlike wages and unemployment rates, job status was tied rather closely to educational attainment, with more education resulting in higher status jobs.

Effects of Various Environments and Experiences

We examined variations in occupational outcomes as a function of a disparate set of environments and experiences, including: military service, marital/parental status, urbanicity, region, and county-level labor market conditions. In general, relationships were weak, particularly when a few control variables were introduced. More unemployment was found among veterans, among single respondents, in urban areas, and in the non-South regions. Wages and status varied little except that they were highest in the most urban areas.

Job Status: Its Predictors and the Role of Education

Using a number of variables measured in tenth grade, combined with educational attainment as of 1974, we could account for just about one-quarter of the variance in status of attained occupation. Educational attainment had a major direct effect on attained status ($p = .315$, Table 3-12). Person characteristics (the tenth grade measures) also had a substantial direct effect on status ($p = .239$), but in addition these person characteristics had a major indirect effect, operating through attained education.

Job Satisfaction

We examined in Chapter 4 the satisfaction of our respondents with their jobs. We also examined the correlates of job satisfaction, in particular, educational attainment and job characteristics. We found that absolute levels of satisfaction seemed to be fairly high, in that sixty-one percent of the respondents indicated they were very or quite satisfied with their jobs. But this level of satisfaction

is actually relatively low compared to data from other surveys of older workers.

Educational and Occupational Attainment

We observed an essentially zero relationship between educational attainment and job satisfaction, but this turned out to be only part of the story. Status of attained job correlated positively with job satisfaction and, of course, with educational attainment. After controlling for status of attained job, educational attainment actually had a negative effect on job satisfaction. In other words, within any given level of job status, the more educated were less satisfied. In light of current trends in the proportion of the population with advanced degrees and the less-than-commensurate growth of jobs requiring advanced degrees, this phenomenon of low satisfaction among highly educated groups with low status jobs could become an important social problem in the future.

Characteristics of Satisfying Jobs

The basic finding here was that intrinsic reward characteristics appeared more relevant to an individual's sense of satisfaction with his work than did monetary reward or job security. The latter are not necessarily unimportant, but they are not the keys to a satisfying job.

Self-Esteem

Overall Changes in Self-Esteem

Self-esteem scores were fairly high for our respondents at

the start of tenth grade, and rose gradually to a level one full standard deviation higher during the eight year span of the study. Although there was a substantial upward shift, there was also a good deal of stability in scores from one year to another (i.e., the same individuals tended to be high in self-esteem from one year to the next). We estimated the stability for one year intervals to be about .90. Coupled with the fact that the rise in scores was quite gradual, this suggested that self-esteem may be regarded as a relatively enduring characteristic rather than something which shifts abruptly from one situation to another.

Self-Esteem and Attainment

We examined the links between self-esteem and educational and occupational attainment. As expected, we found that both educational attainment and occupational status correlated positively with self-esteem. But contrary to expectations, educational attainment as of 1974 was more strongly correlated with tenth grade self-esteem than with 1974 self-esteem. Path analyses led to these conclusions:

(1) Self-esteem during high school has little or no direct causal impact on later educational and occupational attainment; they are correlated primarily because of shared prior causes including family background, intellectual ability, and scholastic performance.

(2) Occupational status has a modest direct positive impact on self-esteem.

(3) Post-high school educational attainment has no direct impact on self-esteem, and only a trivial indirect impact via occupational status.

- (4) Unemployment seems to have a negative impact on self-esteem.

Motives, Affective States, Values, and Attitudes

A number of outcome dimensions were explored in the Youth in Transition project. Here we will very briefly summarize a few of the more interesting findings from Chapter 7.

Motives, Affective States, and Values

Because most of these dimensions were not measured in 1974, we really cannot say anything about the effects of post-high school environments. However, we did look at their relationships with educational attainment. A number of them showed a pattern of declining correlation with educational attainment, similar to that for self-esteem. In particular, need for self-development, need for self-utilization, social values, and internal control showed a rather sharp decline in correlations. Measures of happiness, negative affective states, and somatic symptoms did not mimic the self-esteem pattern so well.

Views About Government

Interest in government was higher during high school among the high ability students headed for college, and after college the effect was a bit stronger. Trust in government declined sharply from 1966 to 1974, mirroring a similar decline among national cross-sections of adults.

Views About Vietnam and the Military

Much of the decline in trust in government was due to

dissatisfaction with U.S. policy in Vietnam. Dissatisfaction increased very considerably from 1969 to 1974. Military spending and influence also became somewhat more critically viewed, although the change was not so great as that for Vietnam dissent. Educational experiences seemed to have some impacts in this area. College attendance, the quality of college attended, and the major area of study all showed relationships with Vietnam and military views. Military service experience also showed an impact on these views; those who had served were less critical of Vietnam policy and more favorable to the military.

Views About Other Social Issues

Population concern and views about birth control and abortion were measured in 1970 and 1974. There was very little change observed along these dimensions during that period. Generally, the more advantaged respondents, in terms of family background, ability, and level of education attained, were more concerned about population and more approving of making abortion and birth control information available.

With respect to racial issues, we can repeat the concluding statements from Chapter 7:

There are modest differences in racial attitudes between those whites in the high school class of 1969 who went to college and those who did not; however, these differences were to some extent evident by the end of high school, before any socializing effect of college could have taken place. The fact that these differences are not larger, and the fact that they were evident to some extent prior to college entrance, may indicate that in the area of racial attitudes the college educated are now less clearly the "forerunners." Perhaps the seventies represent a "post-forerunner" stage in which (a) the brighter and more able students show more positive racial attitudes before they leave high school, and (b) the gap in attitudes between educational groups is growing smaller. (p. 7-25)

Job Attitudes and Aspirations

Occupational Aspirations

Overall occupational aspirations, as measured by the Duncan status scale, showed a good deal of stability by the time the young men were in high school. There was a strong relationship with educational attainment, but no real shifts which might have indicated an effect of post-high school education. Marital and parental status were related to some changes. The single respondents and the married respondents with no children showed a steady downward shift in aspiration throughout the study, but those who were parents by 1974 showed a much steeper drop in aspirations throughout the first four years of data collections, followed by a very slight rise from 1970 to 1974. However, these differences might be attributable to other differences in family background, ability, and school performance rather than to any direct impact of marriage and parenthood.

Occupational Attitudes

Respondents' attitudes toward different aspects of jobs were assessed at all five times. Considerable change was evident in one index, job that doesn't bug me, and very little change was seen in another, job that pays off. In sum, the young men in our sample continued to want jobs that offer good opportunities; they became much less worried about whether a job required them to work hard, to get dirty, to take responsibility, and the like.

Another substantial change occurred in the relationship of job attitudes and educational attainment. Differences among the educational groups which were evident at tenth grade diminished and in

some instances reversed eight years later. Those with lower levels of attained education became much more willing to take on responsibility, to learn new things, and to get dirty, if necessary; they also became more concerned about good pay and job security.

Delinquent Behavior and Drug Use

The measures of delinquency and drug use were based on respondents' self-reports. Because of this, it is especially important to confront the question of validity. We presented several pieces of inferential evidence, all of which lead us to believe that the measures are basically valid.

Delinquent Behavior

We focused on three indexes of delinquency: interpersonal aggression, theft and vandalism, and seriousness of delinquency. All three indexes showed an appreciable drop in scores from 1966 to 1974. Along all three dimensions there is a negative correlation with educational attainment. Multivariate analyses indicated that the different levels of delinquent behaviors, especially interpersonal aggression, shown by those with different levels of education, reflect deeply ingrained patterns of behavior that were fully in evidence as early as junior high school. The correlations between delinquency and job status are smaller and show a similar pattern of consistency over time; we therefore concluded that these correlations appear simply because job status is a weak proxy for educational attainment. Unemployment remained as an environmental experiential factor which

may have had some direct impact on interpersonal aggression, but even there the impact was quite small. On the whole, we concluded that the delinquency differences linked to educational and occupational circumstances in 1974 were largely a reflection of long-standing patterns and were not the results of the specific post-high school experiences we examined.

Drug Use

We included in the 1970 and 1974 questionnaires a number of questions about the use of illegal drugs, and the use of alcohol and cigarettes. From 1969 (measured retrospectively) to 1974 there were considerable shifts in usage rates for alcohol, marijuana, and other illegal drugs. Cigarette use showed rather little change in that period.

Educational Attainment. The largest difference between those who went to college and those who did not was not in the use of alcohol or marijuana or any other illicit drug. The really big difference was in the daily use of cigarettes--the higher the level of education the lower the likelihood of being a smoker. This was not an effect of education, however; the differences were present by the time most respondents were seniors in high school. Alcohol use showed a negative correlation with educational attainment, but the strength of that relationship declined from 1969 to 1974. The illegal substances showed very little relationship with education. The fact of simply going to college or not appeared not to bear much relationship to the use of illegal drugs. But the major program of study elected in college did show a correlation with the use of illegal drugs.

In particular, humanities and arts majors were more likely to be users of illegal drugs. The differences among majors were considerably less for tobacco and alcohol.

Occupational Experiences. Job status and employment (versus unemployment) showed rather little relationship with alcohol and cigarette use. But the data implied that failure to find a job contributed to illegal drug use.

Marriage. The findings with respect to marriage suggested that marriage seemed to "tone down" the excesses of young men in their early twenties. Single men tended to increase substantially their use of alcohol and illegal drugs from 1969 to 1974, while married men showed much less of an increase.

Conclusion

More than anything else, the Youth in Transition project has been a study focused on change. The opening words of Volume 1, written a decade ago, were: "Adolescence is a time of change, a time of transition" (Bachman et al., 1967, p. 1). The scope of the project has since been extended beyond its earlier design to include young adulthood as well as late adolescence. Attitudes, aspirations, self-concepts, and behaviors were expected to be particularly sensitive to change as a result of various social environments. Repeating the same measures of many of these dimensions in all five data collections has provided us with a unique opportunity to examine different groups and different experiences--some of which cannot be identified until after high school--and see whether the differences we find among groups of young men can be traced to different experiences

during their late teens and early twenties.

We have found a good many differences among such groups; but to a large degree, we have found such differences to be relatively stable. In other words, it appears that different individuals tend to seek out different experiences and environments.

Contrary to what might have been expected by those who view adolescence as a period of great turbulence and stress, we have found a good deal of consistency along dimensions of attitudes, aspirations, and self-concept. Others have also found continuity and stability in the transition from mid-teens to early adulthood (Offer and Offer, 1975; Symonds, 1961). As Offer and Offer observed: "As they matured, the adolescent subjects of these investigations retained an overall consistency of psychological and behavioral functioning despite changes in environmental circumstances, family constellations, and work experience" (1975, p. 181).

This is not to say there were no changes at all. People do change in response to environmental circumstances. Our data on illegal drug use provide an example of the effects of two different social environments; marriage seemed to reduce drug use, while unemployment seemed to increase it. But again and again, with respect to attitudes, aspirations, self-concepts and behaviors, we found that differences among groups generally pre-dated the assortment into those groups. To cite one example, those who served in the military had lower than average occupational aspirations, but those lower aspirations were evident during their high school years as well as five years after high school.

The preceding comments seem particularly true for the dimension

of educational attainment; and it has important implications, especially for dropouts.

High School Dropouts. We summarized earlier the major findings regarding the effect of dropping out of high school on various occupational outcomes. And we have pointed out the findings with respect to the entire range of educational attainment on a variety of dimensions. Let us now for a moment focus more clearly on the effects of dropping out on these other dimensions.

Volume III from the Youth in Transition project dealt with the same basic question: Does dropping out really change anything? There it was concluded that "the overall impression to be gained from the data is that dropping out does not change things a great deal--at least not in ways that are apparent by the time a young man reaches the age of nineteen or twenty" (Bachman et al., 1971, p. 175). That overall impression was based on analysis of a number of personality and behavior dimensions, some of which were not measured in 1974. But several key ones were, including self-esteem, occupational aspirations, occupational attitudes, and delinquent behaviors. On all these dimensions, the impression of rather little change due to dropping out can be extended to age twenty-three or twenty-four.

The self-esteem of dropouts was a bit lower than high school graduates in 1974, but it had been a bit lower in 1966 as well. This finding belies expectations that dropouts must surely suffer losses in self-esteem as a result of their public failure to complete high school. Instead, their self-esteem increased considerably from 1966 to 1974--just about the same shift as shown by the graduates.

The occupational aspirations of dropouts were also a bit lower

than graduates in 1974, but the differences had been greater in 1966. So, too, with delinquency; dropouts were higher in 1974, but the differences were less than in 1966. In all these cases, dropping out appeared to have essentially no effect. The measures of occupational attitudes did show some small change in relationship; for example, the dropouts became relatively more concerned about having a good paying job. This is by no means a "negative" effect of dropping out; it probably realistically reflects the dropout's more precarious position in the labor market. We conclude from the data that there are very few negative effects of dropping out other than the previously discussed--and very important--increase in unemployment. To the extent that dropouts are disadvantaged, the dropping out is a symptom, not a cause, of their problems.

What implications do these data have? One certainly is that exhorting potential dropouts to stay in school in order to get a better job is likely to be misleading. Five years after graduation, those who ended their education with a high school diploma are not getting better jobs--in terms of status, pay, and job satisfaction--but they do have better chances of being employed. Another implication from the data is that the majority of high school dropouts are probably no better or worse as employees than are graduates. If they were, there would presumably be discernible differences in status and wages. But if dropouts are equally good as employees as are graduates, then why are they less often employed? Two possible alternatives are:

(1) Some dropouts are simply not well-motivated to work. The same qualities which led them not to finish high school lead them

to fail to find or keep jobs.

(2) Jobs are harder to find for dropouts. Given that a high school diploma is a requirement for many jobs which dropouts could perfectly well perform, this alternative is a very likely possibility.

The most probable hypothesis is that both alternatives are true to some extent. Surely some dropouts are misfits; they were unable to fit well into educational institutions and they do not fit well into occupational institutions either. But many others need not be considered misfits. Whatever the reasons that the educational environment did not provide a congenial fit, it does not follow that dropouts in general could not find a congenial fit in an occupational environment.. Indeed, our data indicate that many dropouts do find the occupational environment to their liking.

We believe that dropouts are often victims of discrimination in the job market. Some employers who require a diploma for jobs are discriminating on the basis of a credential which may not be truly indicative of the applicant's potential as an employee. Some proportion of dropouts who are really misfits may be screened out effectively by the requirement of a diploma. But this is not a very efficient screening mechanism for the society as a whole. Forcing every young person to stay in school through twelfth grade in order to help in screening for employment hardly seems cost-effective. For one thing, the sheer cost of educating everyone for twelve years, when ten years might suffice very nicely for many, is extravagant. For another, by keeping in school individuals who basically do not fit in well with educational institutions, we

needlessly make life much more difficult for those who do fit in well; both teachers and serious, willing students suffer from the enforced presence of individuals who have little or no positive incentives to be in school. And the experience is considerably unpleasant for the potential dropouts, who stay in school in an unhappy environment, doing little but wasting time and causing problems for others. The views expressed at an earlier stage of our research seem equally applicable now, based on our follow-up data five years after high school graduation:

Is it clear that we should prescribe twelve or more years of uninterrupted schooling for virtually all young people in the United States? The campaign against dropping out seems based on the assumption that everyone needs at least twelve years of formal education. But the research reported here has led us to question that assumption. We have found that some young men can manage reasonably well on the basis of ten or eleven years of education. Perhaps others would do so if they were not branded as "dropouts."

Certainly there are alternatives to a twelve-year diploma; perhaps one based on ten years would be sufficient. Young people wishing to enter college might spend the years equivalent to grades eleven and twelve in publicly supported college preparatory academies. Others might enter one-year or two-year vocational training or work-study programs; some such programs could be publicly operated, and some might be privately operated in conjunction with a system of publicly-supported tuition vouchers. Still other young people might choose to go directly into the world of work after their tenth-grade graduation--some to return to part-time or full-time education after a year or two or three. The recent growth of community colleges with their wide-ranging course offerings, flexible time schedules, generous enrollment policies and low tuition rates suggests that there is a growing need for this sort of educational freedom and opportunity.

In a world of rapidly changing technology with its emphasis on continuing education and periodic retraining, there is less and less reason to maintain the traditionally sharp boundary between the role of student and the later role of worker. Shortening the prescribed minimum period for full-time uninterrupted schooling might be a positive step toward new patterns of lifetime education in which individuals can choose for themselves among a wide range of "educational life-styles." If such changes would reduce

the credential value attached to high school diplomas, all the better. One of the unfortunate side effects of the anti-dropout campaign has been the tendency to confuse education with credentials; any step in the opposite direction could have a salutary effect on our whole educational establishment.

The above notions are speculations triggered by some of our findings; we are not presenting them as thoroughly researched proposals. Our purpose is simply to illustrate that there are potentially viable alternatives to the traditional twelve-year program of study which we now urge upon practically every teenager. The basic point, in our view, is that such alternatives should be given serious consideration. (Bachman et al., 1971, pp. 181-82)

FOOTNOTE

¹Of course, it isn't really "fixed"; but to the extent that early measures predict later educational attainment, it implies that to alter the latter the former must be dealt with very early in the educational process.

APPENDIX A

GLOSSARY

This appendix lists the variables referred to in this report and provides some definitions for them. In most cases, the variable name ends with a number or numbers, 1 to 5 separated by slashes; these indicate the times at which the variable was measured. Some of the variables indicate the specific question(s) from the Time 5 (1974) questionnaire, which is reproduced in Appendix H. For example, 5QF1 refers to the Time 5 questionnaire, section F, question number 1. In general, variables have been scored so that higher values indicate a greater degree of whatever the variable name indicates; for example, high values on self-esteem indicate greater self-esteem. Complete lists of items included in the various indexes can be found in earlier Youth in Transition volumes, particularly volumes I and II (Bachman et al., 1967 and Bachman, 1970).

ABILITY COMPOSITE 1

Mean of respondent's standardized scores on three tests of intelligence (the Quick Test of Intelligence, section J [vocabulary] of the General Aptitude Test Battery, and the Gates test of reading comprehension--see QUICK TEST, GATB-J VOCABULARY TEST, and GATES READING TEST).

ABORTION DISAPPROVAL 4/5 (5QJ28)

"A woman should be permitted to have an abortion at any time during the first three months of pregnancy." 1=agree; 2=mostly agree; 3=mostly disagree; 4=disagree.

ACADEMIC ACHIEVEMENT VALUE 1/2/3

This is an index of four items to which the respondent indicates to what extent he considers it to be "a good thing" to demonstrate behaviors indicative of academic achievement. The items are: "study constantly in order to become a well-educated person; working hard to achieve academic honors; striving to get the top grade-point average in the group; studying hard to get good grades in school." The scale ranged from 1.0=low (it is a "very bad thing" to do) to 6.0=high in academic achievement value (it is a "very good thing" to do).

ALCOHOL USE 1-6 3/4/5

Question asks respondent how often he has used alcoholic beverages (for other than medical purposes) during part or all of the last year. 1=never; 2=once or twice a year; 3=3-10 times a year; 4=once or twice a month; 5=once or twice a week; 6=nearly every day.

AMBITIOUS JOB ATTITUDE 1/2/3/4/5

Summary index of amount of job ambition, derived by subtracting the JOB THAT DOESNT BUG score from the JOB THAT PAYS OFF score and adding a constant. Scale: 1.00=low 7.00=high.

AVERAGE GRADE:9th YR 1
 AVERAGE GRADE:10th YR 2
 AVERAGE GRADE:12th YR 3

Respondent reported his average grade for all his courses for the year. 10=failure (E or F), 59% or less; 22=D- (60-62); 25=D (63-66); 28=D+ (67-69); 32=C- (70-72); 35=C (73-76); 38=C+ (77-79); 42=B- (80-82); 45=B (83-86); 48=B+ (87-89); 52=A- (90-92); 55=A (93-96); 58=A+ (97-100).

BLACK:INTEGRATED SCH=1 1

Based on the determined region of respondent's residence and the determined racial composition of respondent's high school. 0=respondent did not attend integrated (more than 10% white) school; 1=respondent attended integrated school.

BLACK:SEG SCHL,NORTH=1 1

Based on the determined region of respondent's residence and the determined racial composition of respondent's high school. 0=respondent did not attend Black segregated (less than 10% white) high school in the North; 1=respondent attended Black segregated high school in the North.

BLACK:SEG SCHL,SOUTH=1 1

Based on the determined region of respondent's residence and the determined racial composition of respondent's high school. 0=respondent did not attend Black segregated (less than 10% white) school in the South; 1=respondent attended Black segregated school in the South.

CIGARETTE USE

See DAILY CIGARETTE USE

CLASSROOM GRADES

See AVERAGE GRADE

COLLEGE MEAN ACT SCORE 5

This variable consists of Scholastic Aptitude Test composite scores (i.e., verbal plus mathematical), American College Test composite scores, or estimates of these scores. All institutional means were converted to the equivalent ACT mean score as described in Astin (1971). (These data were obtained from J.N. Morgan and Greg Duncan, 1975.)

COLLEGE PLANS? YES=1 1/2/3

Respondent was asked a series of question about his future plans; if he replied that he would go to college or graduate school in answer to any one of the questions, he was coded as having college plans. 0=no college plans; 1=college plans.

COLLEGE STATUS RANKING 5

Indicates the prestige of having attended a particular institution as an undergraduate; a measure of the social status associated with an institution and not of the educational quality of the institution.

1=two year public schools and four-year unaccredited schools; accredited schools administered by lower-status religious groups, such as Assemblies of God, the Nazarenes, and Seventh Day Adventists

2=lower-prestige public teachers' colleges and their social equivalents among private colleges

3=higher-prestige public teachers' colleges and their social equivalents among private colleges

4=lower-prestige land-grant agricultural and mechanical colleges and their social equivalents among private colleges, as well as other public schools

5=higher-prestige land-grant agricultural and mechanical colleges and their social equivalents among private colleges, as well as other public schools

6=lower-prestige state universities and their social equivalents among the private colleges

7=higher-prestige universities and their social equivalents among the private colleges

8=high quality private colleges and a few very prestigious public institutions

(These data were provided by J.N. Morgan and Greg Duncan, 1975.)

CROWNE-MARLOWE SOCIAL DESIRABILITY

See NEED SOCIAL APPROVAL

CURRICULUM:COLL PREP=1 1/2/3

At Time 1 and Time 2, respondent reported his present program of high school study; at Time 3 he reported his present program if he was still in school or the program he had been in if he had stopped going to school. 0=vocational, business, general, agricultural, or other; 1=college preparatory.

DAILY CIGARETTE USE=1 3/4/5

This variable is based on a question asking respondent how often he smoked cigarettes during the last year. 1=nearly every day; 0=less than daily use.

DELINQ BEHAV IN SCHOOL 1/2/3

A mean of seven items measuring the amount of school-oriented delinquent behavior. Included are questions on how often respondent has been suspended, damaged school property, and gotten into a serious fight at school (see Bachman et al., 1971, p. 94 for complete list of items). Scale: 1.00=never; 5.00=five or more times.

DESIRED FAMILY SIZE

See IDEAL NUMBER CHILDREN

DOES BEST WORK IN SCHL 1/2

"How close do you come to doing the best work you are able to do in school?" 1=not at all close; 2=not very close; 3=somewhat close; 4=quite close, 5=very close.

DRUG USE:AMPH,BARB,LSD 3/4/5

A mean of three items asking respondent how often during the past year he used amphetamines, barbiturates, and LSD for other than medical purposes. Scale: 1=never; 2=once or twice a year; 3=3 to 10 times a year; 4=once or twice a month; 5=once or twice a week; 6=nearly every day.

EDUCATION ATTAINED 1-8 5

This variable was constructed from a number of items relating to amount of education received, including questions on the type of school attended (5QA10-5QA14; 5QE7), the number of years of schooling completed (5QE4), whether or not respondent was a high school dropout at Time 4, the highest degree earned (5QE3), and the dates of most recent enrollment at the last school attended after high school (5QE6). Scale: 1=high school dropout; 2=high school graduate with no further post high school education; 3=high school graduate with some vocational or technical training; 4=high school graduate with some two-year college; 5=high school graduate with some four year college; 6=high school graduate with an associate degree; 7=high school graduate with a bachelor degree; 8=high school graduate with some graduate school.

EMPLOYMENT STATUS

See EMPLOYED? YES=1,NO=0

EMPLOYED? YES=1,NO=0 5

The employed category includes respondents who said they were working for pay at a full-time or part-time job (5QA1a) or said they were mostly working on a job (5QA2) AND who indicated they were working between 1-98 hours per week (5QC2). The unemployed category is comprised of those who said they were on temporary lay-off from work, looking for work, or waiting to report to work (5QA1) or who said they were mostly unemployed (5QA2). 1=employed; 0=unemployed.

EXTRINSIC SCHOOL MOTIVATION

See NEGATIVE SCH ATTITUDES

FAMILY SOCIOECONOMIC LEVEL

See SOCIOECONOMIC LEVEL

FATHERS EDUCATION 1

"How many grades of school did your father complete?"
1=less than high school; 2=some high school (9-11 years); 3=some high school plus non-college training; 4=completed high school (12 years); 5=completed high school plus non-college training; 6=some college; 7=completed college; 8=post-graduate degree.

FATHERS OCCUPATION 1

Occupation recoded to Duncan status score (see JOB STATUS DUNCAN 5).

FLEXIBILITY

A mean of 17 items taken from the California Personality Inventory. Scale: 1.00=low flexibility; 2.00=high flexibility.

GATB-J VOCABULARY TEST 1

Score on part J (vocabulary) of the General Aptitude Test Battery. Score is number of items answered out of 60. Taken at Time 1 only. (See Bachman et al., 1967, p. 68-69; Bachman, 1970, p. 47). Maximum score for sample was 44.

GATES READING TEST 1

Gates Test of reading comprehension taken at Time 1. Score is number correct. Perfect score is 43. (See Bachman et al. 1967, p. 67, and Bachman, 1970, p. 47.)

GOVT SHLD END DISCRIM 3/4/5

A mean composed of three items asking the respondent how strongly he agrees or disagrees that the government should take a role in racial issues. For example, "It is not the government's business to pass laws about equal treatment for all races." Scale: 1.00=disagree; 4.00=agree.

GRADE FAILURE

See REPEATED GRADE=0, NOT=1

GRADES

See AVERAGE GRADE

HAPPINESS 1/2/3/4

Six questionnaire items were combined to form a very simple index of happiness. Five of the items were positive: "I generally feel in good spirits", "I am very satisfied with life", "I find a good deal of happiness in life", "I feel like smiling", "I feel happy". There was one negative item "I feel sad". (See Bachman, 1970, p.132). Scale: 1.00=never happy; 5.00=almost always happy.

HOURS OF HOMEWORK

See # OF HOURS HOMEWORK

HOURLY PAY RATE 5

Respondent's hourly wage, if given (5QC3). If hourly wage not given, pay rate was calculated using the number of hours worked per week (5QC2) and the weekly (5QC3a) or monthly (5QC3b) pay rate.

IDEAL NUMBER CHILDREN 4/5

"All things considered, if you could have exactly the number of children you want, what number would that be?" Actual number (8=eight or more). Scale: 0 to 8.

IMPULSE TO AGGRESSION 1/2/3/4

A mean of the following four items: "I feel like swearing", "I feel like losing my temper at people", "I feel like being a little rude to people", "I feel like picking a fight or arguing with my parents". Scale: 1.00=never true; 5.00=almost always true.

INTEREST IN COURSES 1/2/3

"How interesting are most of your courses to you?" 1=very dull; 2=slightly dull; 3=fairly interesting; 4=quite interesting; 5=very exciting and stimulating.

INTEREST IN GOVERNMENT 1/2/3/4/5

"Some people think about what's going on in government very often, and others are not that interested. How much of an interest do you take in government and current events?" 1=no interest at all; 2=very little interest; 3=some interest; 4=a lot of interest; 5=a very great interest.

INTERNAL CONTROL 1/2/3/4

A mean of items adapted from the Rotter internality scale measuring to what degree the respondent perceives that he controls his own fate, versus the perception that he is controlled by outside events. In one item, for example, the respondent would choose one of the following: "(2) What happens to me is my own doing; (1) Sometimes I feel that I don't have enough control over the direction my life is taking". Scale: 1.00=low internal control; 2.00=high internal control.

INTERPERSONAL AGGRESSN 1/2/3/4/5

A mean of six or eight items which ascertains how often respondent hit, fought, or hurt other people, including relatives, teachers, and students. The interpersonal aggression index is a mean of eight items for Times 1,2,3, and 4. At Time 5, two items were dropped because they were less appropriate for the sample, who were then adults. Therefore the Time 5 version is a mean of six items. Since the deleted items (Hit your father; Hit your mother) had very low incidences, the index is not greatly affected by their exclusion. As a check, the Times 1 to 4 indexes were re-computed, using only six items; in each case the new 6-item version correlated at least greater than .97 with the old 8-item version. In this report we have used the 8-item version for Times 1-4 and the 6-item version for Time 5. (See Table 9-1 for complete list of items.) Scale: 1.00=never; 5.00=five or more times.

INTRINSIC SCHOOL MOTIVATION

See POSITIVE SCH ATTITUDES

JOB CHARACTERISTICS (ACTUAL)

Thirteen items which asked the respondent to rate the extent to which various characteristics were represented on his job. The same characteristics were asked of the job the respondent would like to have (see JOB CHARACTERISTICS (IDEAL)). (See Table 4-3 for complete list of items.)

JOB CHARACTERISTICS (IDEAL)

Thirteen items which asked the respondent to rate how important various job characteristics were for him. See AMBITIOUS JOB ATTITUDE. (See Table 8-2 for complete list of items.)

JOB SATISFACTION 5 (5QF1 with scale reversed)

"All things considered, how satisfied are you with your work experience on your present (or most recent) job?"
1=not at all satisfied; 2=not very satisfied; 3=somewhat satisfied; 4=quite satisfied; 5=very satisfied.

JOB STATUS DUNCAN 5

A socio-economic status rating of occupations developed by O.D. Duncan (1961). It is based on prestige ratings for job titles in the 1947 NORC prestige study and data on income and education for the occupations in the 1950 Census. (Some examples of the scores assigned to occupations are: railroad laborer, 03; bartender, 19;

machinery operator, 22; plumber, 34; locomotive fireman, 45; clergyman, 52; accountant, 78; architect, 90. Scale: 01=low; 96=high status.

JOB THAT DOESNT BUG ME 1/2/3/4/5

A mean of seven job characteristics having to do with the tendency to avoid many things associated with job ambition, such as hard work, long hours, responsibility (see Table 8-2 for complete list of index items). The respondent indicated how important each characterist is. Scale: 1:00=low importance for a job that doesn't bug (high ambition); 4.00=high importance for a job that doesn't bug (low ambition).

JOB THAT PAYS OFF 1/2/3/4/5

A mean of six items which ask how important each job characteristic is to the respondent (see Table 8-2 for a complete list of items). A ranking of high importance implies a good deal of job ambition. Scale: 1.00=low job ambition; 4.00=high job ambition.

LIVES W BOTH PARENTS=1 1

Based on 1966 questions asking whether respondent's natural parents are alive, whether he lives with his own mother and father, and whether his parents are divorced or separated. 0=home broken by death or divorce; 1=home intact.

MARIJUANA USE 3/4/5

Question asks respondent how often he used marijuana (for other than medical purposes) during part or all of the last year. 1=never; 2=once or twice a year; 3=3-10 times a year; 4=once or twice a month; 5=once or twice a week; 6=nearly every day.

MARITAL/PARENTAL STATUS

See MARRIED? YES=1, NO=0; MARRIED PARENT=1; MARRIED NON-PARENT=1.

MARRIED NONPARENT=1 5

Based on question asking for respondent's marital status (5QJ1). 0=single, married with one or more children; 1=married with no children (divorced and separated with or without children assigned missing data).

MARRIED PARENT=1 5

Based on question asking for respondent's marital status (5QJ1). 0=single, married with no children; 1=married with one or more children (divorced and separated respondents with or without children assigned missing data).

MARRIED? YES=1, NO=0 5

Based on question asking for respondent's marital status (5QJ1). 0=unmarried respondents (including divorced and separated); 1=married respondents.

MILITARY INFLUENCE

See PREF MORE MILITARY INFL

MILITARY SERVICE=1 5

Based on series of questions (Section D of the Time 5 questionnaire) concerning respondent's military service. 0=respondents with no military service; 1=respondents who served in the Armed Forces (not including Reserves, National Guard, Coast Guard, or ROTC, who were assigned to missing data on this variable).

MOTHERS EDUCATION 1

"How many grades of school did your mother complete?"
See FATHER'S EDUCATION for codes.

NEED SELF-DEVELOPMENT 1/2/3/4

A mean derived from respondents' self-ratings to 15 questionnaire items (See Bachman, 1970, pp.111, 114) designed to measure the need for self-development, such as: "When I learn something new, I like to set a goal for myself and try to reach it", "I look for opportunities to better myself", "I would be unhappy in a job where I didn't grow and develop", "If I had to lower my goals because I just couldn't make it, that would really hurt". (See Bachman et al., 1967 for complete list of items). Scale: 1.00=low need for self-development; 5.00=high need for self-development.

NEED SELF-UTILIZATION 1/2/3/4

Similar questions to those comprising need for self-development were asked concerning use of one's existing skills and

abilities. An 8-item measure of need for self-utilization asks questions such as: "I wish I had more chance to use some of my skills", "I'd like to bring my usual performance in line with the best I've ever done", "It upsets me when I get worse at something I was once good at", "I am afraid that if I don't keep in practice I will lose my skills". (See Bachman et al., 1967). Scale: 1.00=low need for self-utilization; 5.00=high need for self-utilization.

NEED SOCIAL APPROVAL 1

A mean of thirty-one items adapted from the Crowne-Marlowe social desirability scale, to which respondent replies "true" or "false" to indicate his reactions to a variety of social attitudes and situations. For example: "I am always careful about my manner of dress", "There have been occasions when I felt like smashing things," "I like to gossip at times", "I am sometimes irritated by people who ask favors of me". Scale: 1.00=low need for social approval; 2.00=high need for social approval.

NEED SOCIAL APPROVAL (APP) 1

A mean of eleven items having to do with approach behaviors, subsetting from NEED SOCIAL APPROVAL.

NEGATIVE AFFECT STATES 1/2/3/4

This variable is a grand measure of the negative affective states dimension measured in six indexes--IRRITABILITY (7 items); GENERAL ANXIETY (7 items); ANXIETY AND TENSION (5 items); DEPRESSION (6 items); ANOMIE (8 items); RESENTMENT (7 items). The value for this cluster is a mean of the means of the six index ingredients. Scale: 1.00=low negativity; 5.00=high negativity.

NEGATIVE SCH ATTITUDES 1/2/3

A mean of eight items indicating the respondent's negative or avoidance attitudes toward school; such statements as "Instead of being in this school, I wish I were out working" and "I feel the things I do at school waste my time more than the things I do outside of school" were rated (see Bachman, 1970, p. 108 for a complete list of items). 1.00=low negativity (education has high value); 4.00=high negativity (education has low value).

NUMBER BOOKS IN HOME 1

"How many books are in your home?" 1=none, or very few (0-10); 2=a few (11-25); 3=one bookcase full (26-100); 4=two bookcases full (101-250); 5=three or four bookcases full (251-500); 6=a room full--a library (501 or more).

NUMBER OF HOURS OF HOMEWORK

See # OF HOURS HOMEWORK

NUMBER OF POSSESSIONS IN HOME

See POSSESSIONS IN HOME

NUMBER OF ROOMS/PERSON

See ROOMS/PERSON IN HOME

NUMBER OF SIBLINGS 1

Sum of number of brothers and number of sisters. Actual number coded (7=7 or more). Scale: 0 to 7.

NUMBER YEARS SCHOOLING 5

"How many years of schooling have you completed?" 1=10 years; 2=11 years; 3=12 years; 4=13 years; 5=14 years; 6=15 years; 7=16 years; 8=17 years or over.

OCCUPATIONAL ASPIRATIONS

See STATUS ASPIRED OCCUPATION

OCCUPATIONAL ATTITUDES

See AMBITIOUS JOB ATTITUDES ; JOB CHARACTERISTICS (IDEAL)

PARENTAL PUNITIVENESS 1

Index of ten items in which the respondent rated his parents on how often they did such things as: "take away your privileges", "threaten to slap you", "yell, shout, or scream at you", "disagree about punishing you", etc. Scale: 1.00=never; 5.00=always.

PARTICIPANT IN 1970=1 4

Panel members who responded at Time 4 coded 1; nonrespondents coded 0.

PERCEIVED DISCRIMINATION 3/4/5

A mean of three items asking the respondent how many blacks he thinks miss out on good jobs, housing, and schooling because of racial discrimination. Scale: 1.00=none at all; 4.00=many.

PERSONAL EFFICACY

See INTERNAL CONTROL

POLITICAL ALIENATION

See TRUST IN GOVERNMENT

POPULATION CONCERN 4/5

A mean of six items measuring respondent's concern about overpopulation and his perception of what an ideal population size would be for the U.S. and for the world. Scale: 1.00=low concern about overpopulation; 5.00=high concern about overpopulation.

POSITIVE FAMILY RELATIONS

A mean of twenty-one items having to do with parental punitiveness, closeness to parents, and the feeling that parents are reasonable. See Bachman, 1970, pp. 17-21 for list of items. Scale: 1.00=low positive family relations; 5.00=high positive family relations.

POSITIVE SCH ATTITUDES 1/2/3

A mean of 15 items which stress the intrinsic value of education, for example, "Education has a high value because knowing a lot is important to me", "I believe an education

will help me to be a mature adult". (See Bachman, 1970, p.107 for a complete list of items.) 1.00=low (education has little value); 4.00=high (education has high value).

POSSESSIONS IN HOME 1

An index which sums the number of items from a list of 19 which the respondent indicates he had in his home (including such things as a television, a dictionary, a car, a dog, a daily newspaper, etc.). Scale: 0-19.

PREF MORE MILITARY INFL 3/5

A mean of the following two items: "Do you think military personnel have too much or too little influence on the way the country is run?", and "Do you think the U.S. spends too much or too little on the military?" Scale: 1.00=military has far too much influence; or U.S. spends far too much; 5.00=military has far too little influence, or U.S. spends far too little.

PROGRAM OF STUDY

See CURRICULUM:COLL PREP=1

QUICK TEST 1

This is a test of intelligence taken at Time 1, in which the respondent chose from a group of pictures one which best defined a word. Score was a point for each word correctly identified; highest possible=150. Authors are Ammons and Ammons; it is discussed in detail in Bachman, 1970, pp. 47-62.

RACE

See BLACK:SEG SCHL, SOUTH=1; BLACK:SEG SCHOL, NORTH=1; BLACK:INTEGRATED SCH=1.

RACIAL ATTITUDES

See GOVT SHLD END DISCRIM: SOCIAL DISTANCE (RACE); PERCEIVED DISCRIMINAT

RAISED ON FARM=0,NOT=1 1

Based on question asking respondent where he was (mostly) brought up. 0=respondent brought up on a farm; 1=respondent not brought up on a farm.

REBEL BEHAV IN SCHOOL 1/2

A mean of 13 items in which respondent indicated how often he did such things as "argue with your teachers", "goof-off in class", "skip classes", "cheat on tests", etc. Scale: 1.00=never; 5.00=almost always.

REGION:NORTHCENTRAL=1 1

Based on the determined region of respondent's residence.
0=respondent lived in the West, Northeast, or South region;
1=respondent lived in the North Central region.

REGION:NORTHEAST=1 1

Based on the determined region of respondent's residence.
0=respondent lived in the West, North Central, or South region;
1=respondent lived in the Northeast region.

REGION:SOUTH=1 1

Based on the determined region of respondent's residence.
0=respondent lived in the West, North Central, or Northeast region;
1=respondent lived in the South region.

REGION:WEST=1 1

Based on the determined region of respondent's residence.
0=respondent lived in the North Central, Northeast, or South region;
1=respondent lived in the West.

RELATIVE JOB AMBITION

See AMBITIOUS JOB ATTITUDES

REPEATED GRADE=0,NOT=1 1

"Were you ever kept back a grade?" 0=Yes; 1=No.

ROOMS/PERSON IN HOME 1

Number of rooms in home divided by number of people in home.

SATIS W OWN SCHL WORK 1/2

"How satisfied are you with the way you're actually doing in school?" 1=not at all satisfied; 2=not very satisfied; 3=somewhat satisfied; 4=quite satisfied; 5=very satisfied.

SCHOOL ABILITY

See SELF-CONCEPT SCHL ABIL; DOES BEST WORK IN SCHL; WORKS HARDER THAN AVG, SATIS W OWN SCHL WORK.

SCHOOL MEAN GATB-J 1

High school's mean GATB-J score (see GATB-J VOCABULARY TEST) computed from the scores of all the Time 1 respondents at that school.

SCHOOL MEAN GATES 1

High school's mean Gates score (see GATES READING TEST) computed from the scores of all the Time 1 respondents at that school.

SCHOOL MEAN QUICK TEST 1

High school's mean Quick Test score (see QUICK TEST) computed from the scores of all the Time 1 respondents at that school.

SCHOOL MEAN S.E.L. 1

High school's mean socioeconomic level computed from the combined S.E.L.'s of all the Time 1 respondents at that school.

SELF-CONCEPT SCHL ABIL 1/2

An index of three items in which respondent rates himself in comparison to others his age on overall school ability, reading ability, and intelligence. Scale: 1.00=far below average; 6.00=far above average.

SELF-ESTEEM

1/2/3/4/5

A mean of six items adapted from the Rosenberg scale and four from the Cobb scale. The respondent rated himself on such questions as: "I feel that I'm a person of worth, at least on an equal plane with others" and "I am able to do things as well as most other people". Scale: 1.00=low self-esteem; 5.00=high self-esteem.

SERIOUSNESS OF DELINQ 1/2/3/4/5

A mean of ten items which refers to the frequency of the more serious delinquent acts asked (see Table 9-1 for complete list of 10 items). The "seriousness" items include "set fire to someone else's property on purpose", "hurt someone badly enough to need bandages or a doctor", "taken something not belonging to you worth over \$50", "used a knife or gun or some other thing (like a club) to get something from a person". Scale: 1.00=never; 5.00=five or more times.

SIBLINGS

See NUMBER OF SIBLINGS.

SOCIAL DESIRABILITY

See NEED SOCIAL APPROVAL.

SOCIAL DISTANCE (RACE) 3/4/5

A mean of three items asking the respondent how much he would mind having close contact with people of a different race, for example: "If a family of a different race (but same level of education and income) moved next door to you, how would you feel about it?". A high score indicates a large social distance.

SOCIAL VALUES CLUSTER 1/2/3/4

A composite measure designed to tap values that are highly approved in the United States. This variable is a mean of the means of the following six indexes: HONESTY (7 items); KINDNESS (4 items); RECIPROCITY (7 items); SELF-CONTROL (5 items); SOCIAL RESPONSIBILITY (4 items); SOCIAL SKILLS (6 items). Scale: 1.00=low approval of social values; 6.00=high approval of social values.

SOCIOECONOMIC LEVEL 1

A summary index consisting of six equally weighted components: a) father's occupational status; B) father's educational level; c) mother's educational level; d) number of rooms per person in home; e) number of books in home; f) checklist of other possessions in the home. (See Bachman, 1970, Appendix B for detailed description.) These factors relate to the quality of home environment (but do not rule out factors of genetic endowment). Scale: 1.00 to 8.00.

SOMATIC SYMPTOMS 1/2/3/4

A mean based on an 18-item checklist of physical complaints, including such questions as: "Have you ever had spells of dizziness?", "Are you ever bothered by nightmares?", "How often do you feel you are in good health?". Scale: 1.00=never; 5.00=always.

STATUS ASPIRED OCCUPAT 1/2/3/4/5

The Duncan status rating of the job the respondent thinks he might do for a living, 5QG1 (see JOB STATUS DUNCAN).

TEST ANXIETY 1/2

A mean of fourteen true/false items, adopted from the Mandler-Sarason Tex Anxiety Questionnaire, measuring how anxious respondent gets about tests and exams; for example, "I freeze up on things like intelligence tests and final exams", "I usually get depressed after taking a test". 1.00=low test anxiety; 2.00=high test anxiety.

THEFT AND VANDALISM 1/2/3/4/5

A mean of nine items which measure the number of times respondent has committed acts of theft or vandalism. (See Table 9-1 for complete list of items.) Scale: 1.00=never; 5.00=five or more times.

TRUST IN GOVERNMENT 1/2/3/4/5

A mean of three items measuring the extent to which the respondent trusted the government not to waste money, to do what is right, and to be run by capable people. See Bachman, 1970, p. 152 for items. Scale: 1.00=low trust; 5.00=high trust.

TRUST IN PEOPLE 1/2/3/4

A mean of three items in which the respondent chooses between statements indicating faith or lack of faith in other people. For example, respondent would choose between: "(1) Most people try to be helpful; (2) Most people are just looking out for themselves". Scale: 1.00=low trust; 2.00=high trust.

URBANICITY

See RAISED ON FARM=0, NOT=1 and URBANICITY 1-4.

URBANICITY 1-4 5

Based on respondent's description of the place he lives, 5QA4. 1=rural community or small town or city of fewer than 50,000; 2=medium sized city (50,000-100,000) or suburb of medium sized city; 3=fairly large city (100,000-500,000) or suburb of fairly large city; 4=very large city (over 500,000) or suburb of a very large city.

VIETNAM DISSENT 3/4/5

A mean of six items, three anti-Vietnam war items and three items that could be termed "pro-Vietnam war". The mean score across the six items was used to classify respondents according to their views on the Vietnam war. Scale: 1.00=support for U.S. policy in Vietnam; 4.00=disagreement with U.S. policy in Vietnam.

WAGES

See HOURLY PAY RATE.

WORKS HARDER THAN AVG 1/2

"How hard do you think you work in school compared to the other students in your class?" 1=much less hard; 2=less hard; 3=about average; 4=harder; 5=much harder.

OF HOURS HOMEWORK 1/2/3

"About how many hours do you spend in an average week on all your homework including both in and out of school?" 1=no hours; 2=1-4 hours; 3=5-9 hours; 4=10-14 hours; 5=15-19 hours; 6=20-24 hours; 7=25 or more hours.

APPENDIX B

SAMPLING AND STATISTICS

As reported in Bachman et al. (1967, pp. 21-24, 123-129), the sample for this study was selected in three stages. Stage one consisted of the Survey Research Center's national sample of counties and metropolitan areas selected from each of 88 strata. Stage two involved selecting one school from each such county or metropolitan area. (In one area several attempts were unsuccessful in locating a school willing to participate; therefore, it was necessary to omit this area and proceed with 87 schools.) Finally, stage three consisted of randomly selecting about 25 boys from each school.*

Given this type of clustered and stratified sample design, it is not appropriate to apply the standard, simple random sampling formulas to obtain estimates of sampling errors. The use of these formulas will almost always understate the actual sampling errors.

One measure of this understatement is the design effect (DEFF). For each sample estimate, the design effect is the square of the ratio of actual standard error to the expected standard error of the estimate from a simple random sample of the same size.

$$\text{DEFF (sample estimate)} = \left[\frac{\text{actual standard error of the estimate}}{\text{expected standard error of the estimate if the sample were simple random of the same size.}} \right]^2$$

For most of the *simple means* in this report, our estimates suggest that design effects will be under 3.

We recommend that an assumed value of $\text{DEFF} = 2.8$ be used in computing standard errors for the proportions (p) presented in this report. Estimate s.e. (p) by

$$(1) \quad \text{s.e. (p)} = \sqrt{\frac{\text{DEFF} p(1-p)}{N}} = 1.7 \sqrt{\frac{p(1-p)}{N}}$$

* An earlier version of this appendix was written by Martin Frankel, Sampling Section, Survey Research Center. We are grateful to Leslie Kish and Irene Hess for developing the sampling procedure used in this study.

Although the clustered nature of the data collection (sampling) introduces correlation between observations, we feel that the sampling error of a difference between two proportions p_1 and p_2 , based on subclass sizes of N_1 and N_2 respectively, may be conservatively estimated as

$$(2) \text{ s.e.}(p_1 - p_2) = \sqrt{\text{DEFF} \left[\frac{p_1(1-p_1)}{N_1} + \frac{p_2(1-p_2)}{N_2} \right]} = 1.5 \sqrt{\frac{p_1(1-p_1)}{N_1} + \frac{p_2(1-p_2)}{N_2}}$$

Even when design effects for simple means are rather large, there exists a good deal of evidence to indicate that design effects for more complex statistics (e.g., regression and MCA coefficients, correlation coefficients, MCA Etas and Betas) are significantly lower (Kish and Frankel, 1970; Frankel, 1971). An appropriate estimate of the design effect for the present study is around 2.25.

With a design effect of 2.25, the value of the product-moment correlation needed to be significantly different from zero at $p = .05$ is about .074. The following table presents estimates of the standard errors for r :

Value of r	Estimated Standard Error ($N = 1600$, $\text{DEFF} = 2.25$)
.10	.037
.15	.037
.20	.036
.30	.034
.40	.032
.50	.028

With only two categories in an independent variable, the eta value required for significance at the .05 level is equal to that required for r , since in that case r is equal to eta. The following table shows the required values of eta for 2, 5, and 8 categories, and also indicates the corresponding eta values if the sampling were simple random.

Eta Value Required for Significance at $p = .05$, $N = 1600$:

Number of Categories	Simple Random Sampling	Clustered Sampling ($\text{DEFF} = 2.25$)
2	.049	.074
5	.077	.116
8	.094	.141

The reader is cautioned against using these standard errors for computing precise significance levels or confidence intervals. These standard errors as well as the necessary normal distributional assumptions are only approximations.

APPENDIX C

PANEL BIASES

Repeated Measurement Effects

One of the sources of bias in a panel study is that participation may have some effect on the respondents. "Panel conditioning" or repeated interview effects can best be examined by drawing an independent sample from the population and comparing their responses to those of the panel. Built into the original design of the study was a provision to do exactly this. In 20 of the schools in the probability sample, a supplementary random sample of 10 to 15 boys per school was drawn in 1966, following the same procedures as used in selecting the original sample in each school. This "control" sample consisted of 248 boys in 20 schools. The names and addresses of these boys were recorded and filed, but no contact of any kind was made to indicate this selection to the boys.

In the case of each school providing control group subjects, we assume that there were at the start no systematic differences between the control subjects and those selected to participate fully. Therefore, any significant differences between the control group and the main panel of respondents can properly be attributed to some aspect of the experience of participating in the study. To the extent that few or no significant differences appear, the validity of the study findings will be supported so far as this source of bias is concerned.

In April of 1970, the first contact was made with the control sample, in the form of a letter inviting them to join the study. It was decided to restrict the data collection to control sample members who had not moved from their 1966 addresses. Of the 248, 105 had moved by 1970, making the effective sample 143; 115 (80.4%) of this sample were actually interviewed, the remainder having refused. To the extent

possible, the interview session for control group members was exactly the same as for all other respondents. A very few questions required rewording because they referred to previous experience in the study.

The responses of the final control sample of 115 were compared with those of the comparable panel members from the same 20 schools. Because movers were systematically excluded from the control sample, movers were also excluded from the corresponding panel. The final panel comparison group was 340.

There was a great variety of dimensions on which comparisons could be made. Fully 104 variables were examined to see whether there were significant differences between the two groups; t-tests were used in all but three cases where chi-square tests were used. The variables included virtually all of the major dimensions measured at Time 4 (1970). Exactly five variables out of the 104 tested showed differences which were statistically significant with probability less than .05.* Since we would expect to find about five significant differences purely by chance, and since there is no obvious pattern to the variables which did show some significant differences, we conclude that the panel members show no effect from repeated interviewing, and that this source of bias can be ignored.

Panel Attrition Effects

In assessing the importance of panel attrition, the major comparison of interest is between the original group of 2213 respondents, and the retained group of 1628. This is the major comparison because we are implicitly or explicitly assuming that the relationships observed in the

*Control sample respondents averaged higher on measures of flexibility, ambitious job attitudes, and use of amphetamines; they averaged lower on a measure of resentment. The controls were also more likely to have dropped out of high school.

1628 retained respondents are close approximations to the unobserved relationships in the entire sample of 2213. How valid this assumption is depends on the related comparison, how different the 585 panel leavers are from the stayins. There are several levels of analysis at which comparisons can be made. One is univariate (do the means or distributions differ between the groups?), a second is bivariate (do product-moment correlations differ between the groups?), and a third is multivariate (do regression coefficients differ between the groups?).

Univariate. First we look at the difference between the 2213 and the 1628 on a number of variables. (A much larger set of variables was screened; the reduced number includes all those which showed any non-trivial differences.) Table C-1 presents the means and standard deviations for the three groups of 2213, 1628, and 585. The table also presents the t-ratios between the means for the 585 leavers and the 1628 stayins, and also the bias--defined as the difference between the means in the 2213 and 1628, divided by the standard deviation in the 2213.

Bias is perhaps the most important measure since it shows how different the 1628 are from the 2213. This measure is as much as .10 (or 10% of a standard deviation) for only three variables, race and two measures of intellectual ability. Other variables for which bias exceeds .05 are the Quick Test, grades, broken home, and socioeconomic level.

As noted, these variables have been pre-selected for having shown some participation related differences. Not surprisingly, then, the t-ratios demonstrate that for most of the variables, the 585 nonparticipants are significantly different from the 1628 participants (ignoring design effects). But, as previously indicated, the bias in most cases is rather small, usually being less than 5% of a standard deviation.

How specifically do the nonparticipants differ from the participants? We restrict our attention to those variables for which the t-ratio is at least 2.94, which would be statistically significant at probability less than .05, taking a design effect of 2.25 into account. The

nonparticipants scored lower on ability measures, on plans to go to college, average grades, positive family relations, a measure of socioeconomic level, and are more likely to be black. They scored higher on measures of negative school motivation, need for social approval, parental punitiveness, urbanicity, and are more likely to come from a broken home.

Bivariate. A matrix of intercorrelations among the twenty-four variables in Table C-1 was generated for each of three groups: the 2213 original (Time 1) respondents, the 1628 Time 5 respondents, and the 585 Time 1 respondents who were not Time 5 respondents. For the latter two groups, z-tests were computed on each of the 276 pairs of corresponding correlations. In 47 instances, the z value is greater than 2.0. In all but one of these cases, the absolute value of the correlation based on the 1628 respondents is higher than the corresponding correlation based on the 585 panel leavers. In other words, where the strength of relationship differs, the relationship is stronger in the retained sample.

This result would probably be expected on the grounds that the later nonparticipants are in some sense "poor respondents." As a group, they score lower in measures of intellectual and verbal ability, which implies that there is probably more measurement error in their responses. They are also likely to be less motivated to respond accurately, particularly since the initial interviewing and questionnaire administration took place in a school setting. Their lower grades, lower socioeconomic level, and more negative school motivation all suggest lower motivation to perform well in such a setting. It was noted earlier that nonparticipants scored higher in need for social approval, which at least superficially is inconsistent with a hypothesis that they are less motivated to perform well. But if need for social approval is viewed as a sort of lie scale, or a tendency to distort the truth in a socially desirable direction, then the result is consistent with expectation.

A reassuring aspect of the matrixes is that even when the correlation based on the 1628 participants differs significantly from the corresponding correlation based on the 585 nonparticipants, the correlation based on the 1628 is usually not very different from that based on the 2213. In only one of the 47 cases where the z value is at least 2.0 does the correlation based on 1628 differ from that based on 2213 by as much as .05. Most of the time the differences are .02 or .03, and it must be remembered that these are all cases likely to have the largest differences. For the entire matrix, the differences are slight indeed. We conclude from these data that analyses based on the 1628 retained respondents are not likely to be in serious error.

Multivariate. We can test this conclusion by setting up a simple multivariate analysis. Suppose we have a model that posits that plans to go to college are directly dependent on socioeconomic level (SEL), ability, and grades; that grades are directly dependent on SEL and ability; and that ability is directly dependent on SEL. We can estimate path coefficients for such a model using the matrix of correlations based on all 2213 cases, and also the matrix using only the Time 5 participants. Estimating the coefficients both ways results in very similar values; no coefficient differs by as much as .020 between the two. The SEL-grades link in both instances is about .07; removal of this link results in estimates where again no coefficient differs by more than .020 between the two. The proportion of variance explained in college plans is slightly higher in the case of the 1628 analysis (.186 versus .167). This is to be expected given that zero-order correlations tend to be higher in the matrix based on 1628 respondents than in that based on 2213.

The variables used in this analysis are variables which show relatively substantial differences between the participants and non-participants. In spite of this, the estimates derived from the 1628 differ very little from those derived from the 2213. These data support our contention that sample attrition has probably not resulted in serious errors in analyses or relationships among variables.

TABLE C-1

Variable	Time 1 Respondents N = 2213		Time 5 Respondents N = 1628		Time 5 Non-Respondents N = 585		t- ratio ^a bias ^b	
	(1)	(2)	(3)	(4)	(5)	(6)		
	M	SD	M	SD	M	SD		
Socioeconomic Level	5.02	.80	5.08	.80	4.86	.78	5.67	-.07
Parental Punitiveness	2.34	.69	2.31	.67	2.44	.71	-3.99	.05
Broken Home	.21	.41	.17	.38	.30	.46	-6.83	.09
Positive Family Relations	3.50	.54	3.53	.54	3.44	.55	3.41	-.04
Race	.88	.32	.92	.28	.80	.40	7.54	-.10
Urbanicity	3.29	1.66	3.22	1.65	3.50	1.65	-3.57	.05
Quick Test	108.64	12.29	109.68	11.90	105.77	12.90	6.66	-.08
GATB-J	19.03	6.59	19.70	6.38	17.19	6.83	8.01	-.10
Gates Test	36.15	6.08	36.82	5.42	34.26	7.31	8.89	-.11
Average Grades (9th)	39.97	7.24	40.50	7.10	38.50	7.41	5.78	-.07
College Plans	.59	.49	.61	.49	.52	.50	3.80	-.05
Positive School Attitudes	3.25	.53	3.26	.52	3.22	.56	1.62	-.02
Negative School Attitudes	1.90	.61	1.88	.60	1.98	.64	-3.40	.04
Self-Concept:School Ability	4.15	.73	4.16	.74	4.10	.70	1.77	-.02
Self-Esteem	3.75	.52	3.74	.52	3.78	.52	-1.76	.02
Need Social Approval (App)	1.56	.20	1.55	.20	1.59	.20	-4.24	.05
Negative Affective States	2.62	.54	2.62	.55	2.60	.54	0.69	-.01
Somatic Symptoms	2.20	.59	2.20	.57	2.22	.64	-0.94	.01
Social Values	4.69	.57	4.70	.57	4.67	.58	1.10	-.01
Internal Control	1.66	.19	1.67	.19	1.65	.19	2.16	-.03
Flexibility	1.36	.17	1.36	.17	1.35	.16	2.13	-.03
Status of Aspired Occupation	61.20	26.20	62.10	26.00	58.60	26.80	2.40	-.04
Interpersonal Aggression	1.54	.58	1.52	.57	1.58	.61	-2.15	.03
Total Delinquency	1.63	.54	1.62	.52	1.66	.57	-1.63	.02

^aThe t-ratio is between the means of the Time 5 respondents and non-respondents. (Column (3) versus column (5))

^bBias is the difference between the means of all the Time 1 respondents and the Time 5 respondents, divided by the standard deviation of the former. (Column (1) minus column (3), divided by column (2))

Comparison of Sample Data with Census Data

As a further check on the degree of bias present in the 1974 sample, Tables C-2 and C-3 show selected characteristics from the sample and comparative data from the U. S. Bureau of the Census. Table C-2 shows that the sample is similar to population percentages in region, race, and marital status. The comparison for urbanicity is not so close, probably reflecting the fact that older people are relatively more likely to live in rural areas or small towns. Table C-3 shows the comparison for labor force data. The Youth in Transition sample somewhat over-represents those in school, and under-represents those in the military and other.

TABLE C-2

Selected Characteristics of The Youth in Transition
Panel (Spring, 1974) With Comparative Data from Census Reports

	YIT Males (Median age 22.5 years)	Census	
		Data	Population
A. <u>Region of Residence</u>			
Northeast	21.8%	23.4	} Total Pop. 1974 ^a
North Central	29.5	27.2	
South	30.3	31.8	
West	18.4	17.6	
	100.0	100.0	
B. <u>Urbanicity</u>			
Rural, sm. town, sm. city (<50K)	44.7%	64.1	} Total Pop. 1970 ^b
Medium city/suburb (50K-100K)	17.3	8.2	
Fairly lg. city/suburb (100K-500K)	19.3	11.5	
Very large city/suburb (>500K)	18.8	15.6	
	100.1	100.0	
C. <u>Race</u>			
Black	8.5%	11.6	} Males 20-24 (est.) 1974 ^c
Other	91.5	88.4	
	100.0	100.0	
D. <u>Marital Status</u>			
Single, never married	49.1%	54.9	} Males 22 ^d Males 23 ^e
Married, includes divorced or separated	50.9	45.1	
	100.0	100.0	
		46.4	

^aTotal population, males and females. Source: U.S. Bureau of the Census. Population Estimates and Projections. Current Population Reports. Series P-25, No. 108, November, 1973, p. 2.

^bTotal population, males and females. Source: U.S. Bureau of the Census. Statistical Abstract of the United States 1974. Page 18.

^cMales, age 20-24. Source: Bureau of the Census. Special Studies. Current Population Reports. Series P-23, No. 54, July, 1975, p. 17.

^dMales, age 22. Source: Bureau of the Census. Marital Status and Living Arrangements. Current Population Reports. Series P-20, No. 271, March, 1974, Table C.

^eMales, age 23. Ibid.

C-8
TABLE C-3

Labor Force Data on YIT Sample Compared
With Population Characteristics
Spring, 1974

	Frequency		Percent	
	B.L.S. ^a (Males 20-24 years old)	Y.I.T. (Grade Cohort Males Mdn. 23.4 years old)	B.L.S.	Y.I.T.
Employed	6,441,000	1,148	69.7%	70.5%
Unemployed	542,000	78	5.9 ^c	4.8 ^c
School	1,021,000	282	11.0	17.3
Mil. Srv.	864,000	92	9.4	5.7
Other ^b	371,000	28	4.0	1.7
	9,240,000	1,628	100.0	100.0

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^aBureau of Labor Statistics, Employment and Earnings, 20:11, May, 1974.
Table A-3, p. 20. April, 1974 CPS household survey.

^bB.L.S.: keeping house, unable to work,
Y.I.T.: missionaries, travelling, volunteer work in a kibbutz, etc.

^cThe unemployment rate as typically reported uses a base of the "Civilian Labor Force." Using this would result in a B.L.S. unemployment rate of 7.8% and a Y.I.T. rate of 6.8%.

APPENDIX D

ESTIMATING THE POPULATION DROPOUT RATE

Two sources were used to estimate the true percentage of male high school dropouts who had not secured a high school diploma or its equivalent by approximately age 23. One was the Youth in Transition study, the other was published Census data. In both cases the object was to estimate this figure for the population defined as males who completed nine grades of schooling and entered tenth grade in a public high school in the United States.

Estimates Using the Youth in Transition Data

Number in the Panel Who Are "Dropouts"

At Time 4 it was estimated that there were 395 panel members who at some time between grades 10 and 12 had dropped out of high school (except for illness) for more than a few weeks. This total includes some who later obtained a high school diploma or its equivalent.

Calculations:

157	respondents at Time 4 known to be dropouts
129	"trackbacks" (non-respondents at Time 4 for whom educational attainment information was provided)
109	$217 \times .50$ (remaining non-respondents $\times$ an estimated proportion who should be dropouts -- see Bachman et al, 1971, pp. 19-23)
395	total number of dropouts in YIT panel as of one year beyond normal graduation from high school

Dropouts Without a High School Diploma or Its Equivalent

At Time 5, 209 respondents in the YIT panel were dropouts from high school. Of these, 113 had not secured a high school diploma of some kind.

113	Time 5 respondents without a high school diploma or equivalent. This equals .54 of the 209 dropouts who remained in the panel at Time 5.
110	{ 395 total dropouts in YIT panel -209 Time 5 respondents who are dropouts 186 non-respondents who are dropouts x.54 estimate of proportion of non-respondent dropouts who had not secured a diploma by Time 5. 100 Based on proportion of responding dropouts who had not secured a diploma.
213	estimated number of YIT panel without high school diplomas
+2213	number in YIT panel
9.6%	

10% + 1% is the estimated percentage of the YIT panel who are high school dropouts who at age 23 had not secured a high school diploma or its equivalent since the time they dropped out.

Estimates Using Census Data

Census collected nationwide data on high school completion at the same time YIT was in the field collecting Time 5 data from the panel. The Census findings are reported in "Educational Attainment in the United States: March 1973 and 1974" (Census, 1974b). To use the Census data to make estimates of the same type as made with the YIT panel, adjustments need to be made to both the population base and the definition of educational attainment.

Basically, Census reports that 83.5 percent of the 22-24 year old males had completed 12th grade in "regular" schools (public or parochial systems, day or night sessions). If we eliminate those

who never entered tenth grade (as was done in the sampling frame for the YIT study) the percentage can be increased to 88.2 percent completing twelfth grade (see Table D-1).

But the Census definition of high school completion is more restrictive than YIT's. It is based on responses to two questions: "What is the highest year of school he has ever attended?" "Did he finish this grade?" Most of those who earned their diploma through a high school equivalency exam such as the G.E.D. would not be included in the Census figure. We estimate the percentage who achieved equivalency to be as high as two percent, boosting census data to 90.2 percent. This leaves 9.8 percent as high school dropouts who had not earned a high school diploma or its equivalent. This is virtually the same figure obtained by extrapolation from the YIT data.

In conclusion, we estimate the population percentage of dropouts in the YIT age cohort without high school diplomas or the equivalent by age 23 to be 10 percent, $\pm 1\%$ (taking account of extrapolated estimates); thus the Time 5 YIT panel (6.9 percent dropouts without diplomas) under-represents dropouts by a factor of about 1.4.

Table D-1

Census Data on High School Completion Adjusted
to Match Definition of YIT Population
(22-24 Year Old Males, March, 1974)

Years of School Completed	Numbers (in thousands)		
	Unadjusted	Adjusted	
8 years or less	226	[226] [41.75]	Not part of YIT popula- tion ^a
9 years	167	125.25	
		16.5%	
10 years	224	224	11.8%
11 years	216	216	
12 years	1890	1890	
1 year of college	455	455	
2 years of college	590	590	
3 years	439	Completed 439	88.2%
4 years	657	12th 657	
5 years or more	194	Grade 194	
Total	5058	4,790.25	

SOURCE: Census (1974b)

^a It was estimated that as many as one-quarter (41.75 thousand) of those completing ninth grade would not have entered tenth grade.

APPENDIX E

TABULAR DATA FOR FIGURES

In this appendix the data underlying each figure in the text are presented. The tables are numbered to correspond with the relevant figure; thus, Table E-1-4 provides the data on which Figure 1-4 is based. A word about the tables for figures in Chapter 2: the frequencies provided in the tables in this appendix are based on a six category version of educational attainment, but the figures use only four of those categories.

Table E-1-4

Status of Aspired Occupation, 1966 to 1974

	1966	1968	1969	1970	1974
Mean	62.1	59.9	58.6	58.2	54.6
Standard Deviation	26.0	24.7	24.7	24.4	23.4
N	1231	1222	1271	1280	1360

Table E-2-1

Educational Attainment by Socioeconomic Level

<u>Education</u>	<u>Socioeconomic Level</u>						M.D.	Total
	Low (1)	(2)	(3)	(4)	(5)	High (6)		
Graduate Work	0	3	17	38	32	30	1	121
Bachelor Degree	3	13	51	69	58	49	2	245
Associate Degree	2	8	38	57	29	8	1	143
Some College	16	67	157	190	109	51	15	605
H. . Diploma	49	91	136	84	25	2	14	401
H. S. Dropout	19	32	33	15	5	0	9	113
Total	89	214	432	453	258	140	42	1,628

Table E-2-2

Educational Attainment by Number of Siblings

<u>Education</u>	<u>Number of Siblings</u>								Total
	0	1	2	3	4	5	6	7	
Graduate Work	10	45	38	17	5	5	1	0	121
Bachelor Degree	17	81	67	52	12	10	3	3	245
Associate Degree	8	43	39	23	18	4	2	6	143
Some College	30	124	150	124	78	47	20	32	605
H. S. Diploma	14	60	78	81	52	43	31	42	401
H. S. Dropout	5	9	14	33	22	6	12	12	113
Total	84	362	386	330	187	115	69	95	1,628

Table E-2-3

Educational Attainment by Broken Home

<u>Education</u>	Broken Home			Total
	Home Intact	Home Broken by Death	Home Broken by Divorce	
Graduate Work	107	7	7	121
Bachelor Degree	218	16	11	245
Associate Degree	119	10	14	143
Some College	499	44	62	605
H. S. Diploma	327	30	44	401
H. S. Dropout	78	16	19	113
Total	123	1,348	157	1,628

Table E-2-4

Educational Attainment by Parental Punitiveness

<u>Education</u>	Parental Punitiveness								M.D.	Total
	Low (1)	(2)	(3)	(4)	(5)	(6)	(7)	High (8)		
Graduate Work	11	21	36	28	14	6	3	2	0	121
Bachelor Degree	15	53	73	56	25	11	9	2	1	245
Associate Degree	5	24	39	33	25	11	4	1	1	143
Some College	34	73	156	133	103	62	19	15	10	605
H. S. Diploma	28	56	74	71	57	66	26	14	9	401
H. S. Dropout	6	11	14	24	15	16	16	7	4	113
Total	99	238	392	345	239	172	77	41	25	1,628

Table E-2-5

Educational Attainment by Race

<u>Education</u>	<u>Race</u>				M.D.	Total
	White	Black- Integrated School	Black- Segregated School in North	Black- Segregated School in South		
Graduate Work	116	2	0	0	3	121
Bachelor Degree	232	4	1	5	3	245
Associate Degree	136	3	0	1	3	143
Some College	550	17	16	11	11	605
H. S. Diploma	342	7	11	37	4	401
H. S. Dropout	85	2	8	14	4	113
Total	1,461	35	36	68	28	1,628

Table E-2-6

Educational Attainment by Intellectual Ability

<u>Education</u>	<u>Intellectual Ability</u>					Total
	Low (1)	(2)	(3)	(4)	High (5)	
Graduate Work	1	1	19	57	43	121
Bachelor Degree	1	8	69	106	61	245
Associate Degree	3	12	58	60	10	143
Some College	25	94	227	202	57	605
H. S. Diploma	60	127	156	52	6	401
H. S. Dropout	38	30	30	13	2	113
Total	128	272	559	490	179	1,628

Table E-2-7

Educational Attainment by Grade Failure

<u>Education</u>	Held Back at Least Once	Never Held Back	M.D.	Total
Graduate Work	3	118	0	121
Bachelor Degree	8	237	0	245
Associate Degree	13	130	0	143
Some College	114	490	1	605
H. S. Diploma	128	272	1	401
H. S. Dropout	61	52	0	113
Total	327	1,299	2	1,628

Table E-2-8

Educational Attainment by Classroom Grades

<u>Education</u>	<u>Classroom Grades</u>				M.D.	Total
	A	B	C	D		
Graduate Work	0	12	71	38	0	121
Bachelor Degree	1	41	137	64	2	245
Associate Degree	1	63	74	4	1	143
Some College	26	273	263	43	0	605
H. S. Diploma	35	263	98	4	1	401
H. S. Dropout	27	72	11	1	2	113
Total	90	724	654	154	6	1,628

Table E-2-9

Educational Attainment by Rebellious Behaviour in School

<u>Education</u>	<u>Rebellious Behaviour in School</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	29	57	29	6	0	0	121
Bachelor Degree	50	132	44	16	3	0	245
Associate Degree	27	61	41	13	1	0	143
Some College	80	257	164	69	25	10	605
H. S. Diploma	41	153	107	64	28	8	401
H. S. Dropout	6	30	27	32	15	3	113
Total	233	690	412	200	72	21	1,628

Table E-2-10

Educational Attainment by Program of Study

<u>Education</u>	<u>Program of Study</u>						Total
	Voca- tional	College Prep	Commer- cial	General	Agri- cultural	Other	
Graduate Work	0	96	0	20	0	5	121
Bachelor Degree	2	172	1	61	3	6	245
Associate Degree	9	79	6	35	2	12	143
Some College	29	294	21	216	16	29	605
H. S. Diploma	51	71	31	183	35	30	401
H. S. Dropout	15	12	8	61	5	12	113
Total	106	724	67	576	61	94	1,628

Table E-2-11

Educational Attainment by College Plans

<u>Education</u>	<u>College Plans</u>		Total
	Yes	No	
Graduate Work	110	11	121
Bachelor Degree	219	26	245
Associate Degree	102	41	143
Some College	391	214	605
H. S. Diploma	138	263	401
H. S. Dropout	34	79	113
Total	994	634	1,628

Table E-2-12

Educational Attainment by Negative School Attitudes

<u>Education</u>	<u>Negative School Attitudes</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	70	40	9	2	0	0	121
Bachelor Degree	116	94	27	4	2	2	245
Associate Degree	52	61	16	9	3	2	143
Some College	217	199	117	49	18	5	605
H. S. Diploma	82	131	89	59	31	9	401
H. S. Dropout	12	23	35	25	17	1	113
Total	549	548	293	148	71	19	1,628

Table E-2-13

Educational Attainment by Self-Concept: School Ability

<u>Education</u>	<u>Self-Concept: School Ability</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	0	4	39	62	16	0	121
Bachelor Degree	0	8	94	122	21	0	245
Associate Degree	0	8	89	41	4	1	143
Some College	5	100	314	163	21	2	605
H. S. Diploma	7	106	240	48	0	0	401
H. S. Dropout	8	37	54	12	1	1	113
Total	20	263	810	448	63	4	1,628

Table E-2-14

Educational Attainment by Works Harder than Average

<u>Education</u>	<u>Works Harder than Average</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	5	38	69	9	0	0	121
Bachelor Degree	1	72	151	20	1	0	245
Associate Degree	3	20	105	14	1	0	143
Some College	11	77	418	90	8	1	605
H. S. Diploma	7	27	285	78	4	0	401
H. S. Dropout	3	6	68	29	7	0	113
Total	30	240	1,096	240	21	1	1,628

Table E-2-15

Educational Attainment by Need for Self-Development

<u>Education</u>	<u>Need for Self-Development</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	2	18	50	36	15	0	121
Bachelor Degree	20	54	91	53	26	1	245
Associate Degree	10	40	65	17	11	0	143
Some College	57	187	231	90	38	2	605
H. S. Diploma	83	133	125	50	7	3	401
H. S. Dropout	20	33	40	18	2	0	113
Total	192	465	602	264	99	6	1,628

Table E-2-16

Educational Attainment by Negative Affective States

<u>Education</u>	<u>Negative Affective States</u>				M.D.	Total
	Low (1)	(2)	(3)	High (4)		
Graduate Work	16	58	30	17	0	121
Bachelor Degree	39	83	90	32	1	245
Associate Degree	15	55	49	23	1	143
Some College	66	188	209	138	4	605
H. S. Diploma	42	98	149	109	3	401
H. S. Dropout	7	26	37	42	1	113
Total	185	508	564	361	10	1,628

Table E-2-17

Educational Attainment by Somatic Symptoms

<u>Education</u>	<u>Somatic Symptoms</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	15	50	41	12	3	0	121
Bachelor Degree	26	93	90	27	9	0	245
Associate Degree	18	44	54	23	3	1	143
Some College	58	167	207	122	39	12	605
H. S. Diploma	24	104	129	72	60	12	401
H. S. Dropout	3	25	26	24	32	3	113
Total	144	483	547	280	146	28	1,628

Table E-2-18

Educational Attainment by Social Values Cluster

<u>Education</u>	<u>Social Values Cluster</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	3	27	46	30	13	2	119
Bachelor Degree	13	43	88	76	25	0	245
Associate Degree	6	31	58	34	11	3	143
Some College	73	119	205	149	46	13	605
H. S. Diploma	61	111	125	67	26	11	401
H.S. Dropout	31	29	34	11	5	3	113
Total	187	360	556	367	126	32	1628

Table E-2-19

Educational Attainment by Internal Control

<u>Education</u>	<u>Internal Control</u>				M.D.	Total
	Low (1)	(2)	(3)	High (4)		
Graduate Work	6	16	41	57	1	121
Bachelor Degree	12	53	81	95	4	245
Associate Degree	11	39	45	46	2	143
Some College	56	188	182	167	12	605
H. S. Diploma	33	157	129	74	8	401
H. S. Dropout	17	51	22	19	4	113
Total	135	504	500	458	31	1,628

Table E-2-20

Educational Attainment by Ambitious Job Attitudes

<u>Education</u>	<u>Ambitious Job Attitudes</u>						M.D.	Total
	Low (1)	(2)	(3)	(4)	(5)	High (6)		
Graduate Work	1	10	19	38	41	11	1	121
Bachelor Degree	9	10	61	69	78	17	1	245
Associate Degree	4	16	37	34	38	11	3	143
Some College	43	70	121	181	117	63	10	605
H. S. Diploma	36	78	112	91	54	26	4	401
H. S. Dropout	23	27	30	13	11	7	7	113
Total	116	211	380	426	339	135	21	1,628

Table E-2-21

Educational Attainment by Status of Aspired Occupation

<u>Education</u>	<u>Status of Aspired Occupation</u>					M.D.	Total
	Low (1)	(2)	(3)	(4)	High (5)		
Graduate Work	1	0	9	45	40	26	121
Bachelor Degree	6	6	21	80	90	42	245
Associate Degree	8	5	13	40	39	38	143
Some College	48	31	73	150	157	146	605
H. S. Diploma	76	54	40	78	34	119	401
H. S. Dropout	35	16	9	20	7	26	113
Total	174	112	165	413	367	397	1,628

Table E-2-22

Educational Attainment by Delinquent Behavior in School

<u>Education</u>	<u>Delinquent Behavior in School</u>								M.D.	Total
	Low (1)	(2)	(3)	(4)	(5)	(6)	(7)	High (8)		
Graduate Work	59	27	10	12	6	4	0	1	2	121
Bachelor Degree	103	51	27	30	19	7	1	1	6	245
Associate Degree	53	18	13	26	18	7	4	0	4	143
Some College	154	88	89	117	75	28	28	15	11	605
H. S. Diploma	65	64	54	74	56	31	24	19	14	401
H. S. Dropout	6	11	6	18	21	13	17	11	10	113
Total	440	259	199	277	195	90	74	47	47	1,628

Table E-3-1

Duncan Status of Job by Educational Attainment

<u>Education</u>	<u>Mean Status</u>		<u>N</u>
	<u>Unadjusted</u>	<u>Adjusted^a</u>	
Dropout	23.3	26.5	80
High School Graduate	27.4	29.3	272
Some College	36.2	35.2	327
College Graduate	57.4	54.8	173

eta = .510 beta = .434

Grand Mean = 36.48

Standard Deviation = 22.48

Table E-3-2

Duncan Status of Job by Military Service

<u>Military Service</u>	<u>N</u>	<u>Mean Status</u>		
		<u>Unadjusted</u>	<u>Adjusted^a</u>	<u>Adjusted^b</u>
None	675	38.8	38.1	37.2
Regular	111	29.3	31.4	35.1
Vietnam	66	25.0	28.5	31.6

eta = .204 beta = .144 beta = .071

Grand Mean = 36.48

Standard Deviation = 22.48

^a Adjusting for socioeconomic level, number of siblings, and ability.

^b Adjusting for socioeconomic level, number of siblings, ability, and educational attainment.

Table E-3-3

Employment Status by Marital/Parental Status

<u>Marital /Parental Status</u>	<u>N</u>	<u>Proportion Unemployed</u>		
		<u>Unadjusted</u>	<u>Adjusted^a</u>	<u>Adjusted^b</u>
Single	414	.116	.120	.122
Married, no children	232	.056	.062	.064
Married, parent	256	.055	.043	.038

eta = .109 beta=.125 beta =.134

Grand Mean = .083

Standard Deviation = .276

^a Adjusting for socioeconomic level, number of siblings, and ability.

^b Adjusting for socioeconomic level, number of siblings, ability, and educational attainment.

Table E-3-4

Duncan Status by Marital/Parental Status

<u>Marital/Parental Status</u>	<u>Mean Job Status</u>			<u>N</u>
	<u>Unadjusted</u>	<u>Adjusted^a</u>	<u>Adjusted^b</u>	
Single	39.3	37.6	35.8	383
Married, no children	38.8	38.7	38.7	223
Married, parent	30.0	32.7	35.6	246

eta=.185 beta=.108 beta=.056

Grand Mean = 36.48

Standard Deviation = 22.48

Table E-3-5

Duncan Status of Job by Urbanicity

<u>Urbanicity</u>	<u>Mean Job Status</u>			<u>N</u>
	<u>Unadjusted</u>	<u>Adjusted^a</u>	<u>Adjusted^b</u>	
Rural, Small City	33.6	34.4	35.3	398
Medium City	33.9	35.6	36.0	149
Large City	40.1	38.7	37.9	165
Very Large City	43.1	40.6	38.6	140

eta=.170

beta=.107

beta=.060

Grand Mean = 36.48

Standard Deviation = 22.48

^a Adjusting for socioeconomic level, number of siblings, and ability.

^b Adjusting for socioeconomic level, number of siblings, ability and educational attainment.

Table E-4-1

Job Satisfaction by Education and Job Status

<u>Education</u>	<u>Mean Job Satisfaction</u>							
	<u>Duncan Status of Job</u>							
	<u>Low</u>		<u>20-59</u>		<u>High</u>		<u>Total</u>	
	<u>N</u>	<u>Mean</u>	<u>N</u>	<u>Mean</u>	<u>N</u>	<u>Mean</u>	<u>N</u>	<u>Mean</u>
H. S. Dropout	54	3.63	32	3.75	6	4.50	92	3.73
H. S. Graduate	164	3.60	146	3.86	21	4.09	331	3.75
Some College	119	3.37	197	3.71	67	3.98	383	3.65
College Graduate	22	2.82	48	3.50	109	4.01	179	3.73
Total	359	3.48	423	3.74	203	4.02	985	3.70

Table E-5-1

Self-Esteem by Educational Attainment

<u>Education</u>	<u>Self-Esteem</u>					N (1974)
	1966	1968	1969	1970	1974	
Dropout	3.51	3.67	3.69	3.65	4.05	106
High School Diploma	3.59	3.75	3.76	3.83	4.17	382
Some College	3.75	3.80	3.89	3.89	4.22	601
Associate Degree	3.80	3.86	3.97	3.96	4.26	141
Bachelor Degree	3.90	3.94	3.98	3.98	4.28	244
Graduate Work	4.01	4.06	4.07	4.09	4.40	120
Grand Mean	= 3.74	3.83	3.88	3.90	4.22	
Standard Deviation	= .52	.49	.50	.49	.48	
Eta	= .264	.201	.208	.188	.159	

Table E-5-2

Status of Aspired Occupation by College Plans/Attainment

<u>College Plans/Attainment</u>	1966	1968	1969	1970	1974
NC/NC	34.9	37.6	35.0	35.3	34.9
C/NC	63.9	50.9	45.4	44.2	45.5
NC/C	50.0	52.7	57.0	57.0	52.3
C/C	75.6	71.7	69.1	69.3	64.2
Grand Mean	= 62.1	59.9	58.6	58.2	54.6
Standard Deviation	= 25.9	24.7	24.7	24.4	23.4
Eta	= .630	.549	.538	.557	.494

Table E-5-3

Self-Esteem by Occupational Attainment

<u>Occupational Attainment</u>	<u>Self-Esteem</u>				
	1966	1968	1969	1970	1974
(Low) 01-15	3.64	3.67	3.77	3.77	4.10
16-30	3.64	3.80	3.79	3.78	4.12
31-45	3.72	3.84	3.88	3.92	4.19
46-60	3.68	3.86	3.96	3.97	4.28
61-75	3.86	3.89	3.95	3.99	4.33
(High) 76-96	3.90	4.00	4.04	4.16	4.40
Grand Mean	= 3.71	3.81	3.86	3.88	4.20
Standard Deviation	= .51	.47	.49	.48	.49
Eta	= .177	.180	.176	.241	.194

Table E-8-1

Status of Aspired Occupation by Educational Attainment

Education	1966		1968		1969		1970		1974	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Dropout	87	40.0	66	40.4	57	35.1	66	34.5	88	35.4
High School Diploma	282	46.6	279	42.7	290	39.3	299	39.0	307	39.2
Some College	459	65.6	444	60.7	480	60.6	475	59.9	509	54.3
Associate Degree	105	69.0	119	64.3	122	64.3	120	64.8	123	59.0
Bachelor Degree	203	75.0	205	75.8	209	74.1	210	74.8	219	69.3
Graduate Work	95	77.1	109	78.1	113	77.0	110	78.3	114	78.9
Total	1231	62.1	1222	59.9	1271	58.6	1280	58.2	1360	54.6
Standard Deviation = 25.9 24.7 24.7 24.4 23.4										
Eta = .461 .516 .548 .579 .545										

Table E-8-2

Status of Aspired Occupation by Occupational Attainment

Occupation		Status of Aspired Occupation									
		1966		1968		1969		1970		1974	
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
(Low)	01-15	158	49.6	139	46.3	144	45.7	148	42.1	162	31.3
	16-30	198	50.6	200	49.1	214	44.4	213	46.2	228	40.1
	31-45	138	60.3	131	59.7	128	57.3	144	55.9	152	48.8
	46-60	102	62.7	96	56.6	99	57.9	96	58.0	111	56.1
	61-75	119	68.3	130	65.5	129	66.9	131	65.2	130	66.8
(High)	76-96	40	80.5	45	77.0	43	76.3	41	73.8	48	74.3
Total		755	58.2	741	56.0	757	54.3	773	53.4	831	48.3
Standard Deviation = 26.8 25.2 25.5 24.7 22.9											
Eta = .327 .346 .392 .381 .579											

Table E-8-3

Status of Aspired Occupation by Marital/Parental Status

Marital/Parental Status	Status of Aspired Occupation									
	1966		1968		1969		1970		1974	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Single	591	66.4	595	65.0	621	63.4	627	64.3	650	58.9
Married, No Children	318	61.4	311	60.2	339	59.1	328	58.3	354	54.0
Married, Parent	257	53.7	252	49.1	250	47.3	260	44.6	238	46.2
Total	1166	62.2	1158	60.2	1210	58.9	1215	58.5	1292	54.7
Standard Deviation = 25.9 24.6 24.7 24.3 23.5										
Eta = .195 .254 .251 .316 .213										

Table E-8-4

Preference for a Job with Low Responsibility
by Educational Attainment

Education	Percent Rating Low Responsibility as Not Important									
	1966		1968		1969		1970		1974	
	N	%	N	%	N	%	N	%	N	%
Dropout	111	13.5	82	22.0	83	19.3	71	29.6	106	60.4
H. S. Diploma	395	14.4	361	26.0	352	23.3	340	32.6	381	65.4
Some College	598	23.2	560	37.0	557	36.1	514	41.2	600	74.7
Associate Degree	141	28.4	137	38.0	134	33.6	131	42.0	141	73.8
Bachelor Degree	244	31.1	239	38.9	234	42.3	232	42.2	243	79.4
Graduate Work	119	48.7	118	53.4	118	55.1	115	67.0	119	85.7
Total	1608	23.9	1497	35.2	1478	34.4	1403	40.9	1590	73.0
Standard Deviation = 42.7 47.8 47.5 49.2 44.4										
Eta = .216 .162 .197 .181 .150										

Table E-8-5

Preference for a Job With Good Pay
by Educational Attainment

Education	Percentage Rating Good Pay as Very Important									
	1966		1968		1969		1970		1974	
	N	%	N	%	N	%	N	%	N	%
Dropout	111	55.9	81	53.6	84	53.6	70	55.7	105	73.3
H. S. Diploma	393	65.1	360	61.1	353	59.8	339	59.0	380	67.9
Some College	598	67.2	558	56.6	554	55.1	515	55.1	598	53.3
Associate Degree	141	63.1	138	61.6	134	59.7	131	52.7	141	46.8
Bachelor Degree	244	63.1	240	55.0	233	55.8	233	45.9	242	43.8
Graduate Work	120	62.5	118	49.2	117	47.0	116	40.5	120	31.7
Total	1607	64.6	1495	57.3	1475	56.0	1404	53.1	1586	54.5
Standard Deviation = 47.8 49.5 49.7 49.9 49.8										
Eta = .062 .069 .069 .113 .228										

Table E-8-6

Ambitious Job Attitudes by Marital/Parental Status

Marital/Parental Status	Ambitious Job Attitudes									
	1966		1968		1969		1970		1974	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Single	778	5.13	731	5.26	729	5.27	694	5.21	767	5.54
Married, No Children	402	5.11	382	5.31	373	5.35	355	5.32	400	5.73
Married, Parent	345	4.99	311	5.27	300	5.29	285	5.27	342	5.81
Total	1525	5.09	1424	5.28	1402	5.29	1334	5.25	1509	5.65
Standard Deviation = .68 .66 .65 .64 .57										
Eta = .081 .033 .056 .072 .203										

Table E-9-1

Interpersonal Aggression by Educational Attainment

Education	Interpersonal Aggression									
	1966		1968		1969		1970		1974	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Dropout	103	1.92	81	1.50	82	1.49	71	1.40	106	1.25
H. S. Diploma	386	1.62	359	1.31	361	1.30	318	1.32	385	1.23
Some College	594	1.52	566	1.20	557	1.19	506	1.19	602	1.16
Associate	139	1.41	138	1.14	136	1.11	130	1.12	141	1.08
Bachelor Degree	239	1.35	239	1.11	239	1.07	235	1.10	240	1.06
Graduate Work	120	1.34	119	1.08	119	1.06	116	1.09	121	1.04
Total	1581	1.52	1502	1.21	1494	1.20	1376	1.20	1595	1.14
Standard Deviation	=.57		.40		.38		.39		.32	
Eta	=.253		.252		.280		.242		.216	

Table E-9-2

Interpersonal Aggression by Employment Status

Employment Status	Interpersonal Aggression									
	1966		1968		1969		1970		1974	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Unemployed	83	1.68	79	1.37	79	1.38	69	1.35	88	1.30
Employed	938	1.56	868	1.23	867	1.23	804	1.22	937	1.15
Total	1021	1.57	947	1.24	946	1.24	873	1.23	1025	1.16
Standard Deviation	=.61		.44		.44		.41		.36	
Eta	=.052		.091		.098		.087		.116	

Table E-9-3

Interpersonal Aggression by Marital/Parental Status

Marital/Parental Status	Interpersonal Aggression									
	1966		1968		1969		1970		1974	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Single	760	1.45	735	1.17	738	1.15	687	1.15	772	1.12
Married, No Children	402	1.46	384	1.17	381	1.15	344	1.18	399	1.12
Married, Parent	339	1.73	310	1.32	304	1.33	276	1.31	347	1.16
Total	1501	1.52	1429	1.20	1423	1.19	1307	1.19	1518	1.13
Standard Deviation =	.57		.40		.38		.37		.31	
Eta =	.203		.154		.191		.161		.053	

Table E-9-4

Cigarette Smoking by Educational Attainment

Education	Percent Smoking Cigarettes Daily					
	1969		1970		1974	
	N	%	N	%	N	%
Dropout	70	61.4	70	64.3	106	73.6
H. S. Diploma	317	51.4	315	54.6	384	57.0
Some College	497	37.8	498	44.2	602	49.7
Associate Degree	130	20.0	131	29.0	141	34.8
Bachelor Degree	235	15.7	236	20.8	242	28.1
Graduate Work	116	12.1	116	12.9	120	13.3
Total	1365	34.5	1366	39.5	1595	45.7
Standard Deviation =	47.6		48.9		49.8	
Eta =	.320		.306		.301	

Table E-9-5

Alcohol Use by Educational Attainment

Education	Percent Using Alcohol Weekly					
	1969		1970		1974	
	N	%	N	%	N	%
Dropout	71	47.9	71	52.1	106	65.1
High School Diploma	317	42.3	312	49.7	385	63.1
Some College	500	32.4	501	45.1	603	59.7
Associate Degree	131	25.2	130	43.8	141	59.6
Bachelor Degree	234	19.7	236	38.1	244	53.3
Graduate Degree	115	16.5	115	27.0	120	50.8
Total	1368	31.3	1365	43.7	1599	59.2
Standard Deviation = 46.4				49.6	49.2	
Eta = .202				.130	.083	

Table E-9-6

Marijuana Use by College Major

College Major (1974)	Percent Using Marijuana in Last Year					
	1969		1970		1974	
	N	%	N	%	N	%
Math, Physical Science	56	16.1	56	30.4	56	44.6
Biological Science	53	18.9	53	32.1	53	50.9
Social Science	136	22.1	136	50.0	137	63.5
Humanities & Fine Arts	90	44.4	91	60.4	91	69.2
Engineering	77	11.7	77	33.8	77	53.2
Business	172	15.7	172	26.2	174	47.7
Education	67	10.4	67	22.4	67	37.3
Total	651	20.3	652	37.3	655	53.6
Standard Deviation = 40.2				48.4	49.9	
Eta = .258				.271	.199	

Table E-9-7

Marijuana Use by Employment Status

<u>Employment Status</u>	<u>Percent Using Marijuana in Last Year</u>					
	<u>1969</u>		<u>1970</u>		<u>1974</u>	
	N	%	N	%	N	%
Unemployed	67	25.4	67	47.8	89	77.5
Employed	798	20.8	803	31.0	931	49.3
Total	865	21.2	870	32.3	1020	51.8
Standard Deviation = 40.9			46.8		50.0	
Eta = .030			.096		.159	

Table E-9-8

Marijuana Use by Marital/Parental Status

<u>Marital/Parental Status</u>	<u>Percent Using Marijuana During Last Year</u>					
	<u>1969</u>		<u>1970</u>		<u>1974</u>	
	N	%	N	%	N	%
Single	680	20.7	686	36.4	695	60.7
Married, No Children	342	16.7	342	31.0	354	40.4
Married, Parent	272	23.5	274	32.1	279	40.9
Total	1294	20.2	1302	34.1	1328	51.1
Standard Deviation = 40.2			47.4		.500	
Eta = .060			.053		.201	

Table E-9-9

Alcohol Use by Marital/Parental Status

<u>Marital/Parental</u> <u>Status</u>	Percent Using Alcohol Weekly					
	1969		1970		1974	
	N	%	N	%	N	%
Single	683	26.6	684	38.9	699	61.1
Married, No Children	344	32.3	342	44.4	356	50.8
Married, Parent	273	38.8	272	52.6	285	59.3
Total	1300	30.7	1298	43.2	1340	58.0
Standard Deviation=46.1				49.6	49.4	
Eta=.104				.108	.088	

APPENDIX F

STABILITY COEFFICIENTS

Table F-1 provides estimates of the coefficient of stability for each variable over various time intervals. The stability coefficient is defined as "the correlation between true scores at one time with true scores at another time" (Heise, 1969).

Table F-1
Stability Coefficients for Selected Variables

Variable	Stability Between Data Collection ^a					Annual Stability ^b			
	S ₁₂	S ₂₃	S ₃₄	S ₄₅	S ₁₅	S ₁₂	S ₂₃	S ₃₄	S ₄₅
Average Grades	.89	.88	*	*	*	.93	.88	*	*
Number of Hrs. Homework	.65	.73	*	*	*	.75	.73	*	*
Curriculum	.79	.88	*	*	*	.85	.88	*	*
College Plans	.81	.94	*	*	*	.87	.94	*	*
Interest in Courses	.81	.89	*	*	*	.87	.89	*	*
Pos. School Attitudes	.76	.82	*	*	*	.83	.82	*	*
Neg. School Attitudes	.76	.84	*	*	*	.83	.84	*	*
Acad. Achievement Value	.54	.57	*	*	*	.67	.57	*	*
Self-Esteem	.74	.88	.89	.69	.40	.82	.88	.89	.91
Need Self-Development	.74	.84	.87	*	*	.82	.84	.87	*
Need Self-Utilization	.72	.85	.92	*	*	.80	.85	.92	*
Happiness	.75	.84	.89	*	*	.83	.84	.89	*
Negative Affective State	.76	.89	.93	*	*	.83	.89	.93	*
Somatic Symptoms	.76	.88	.96	*	*	.83	.88	.96	*
Impulse to Aggression	.67	.85	.86	*	*	.76	.85	.86	*
Social Values Cluster	.73	.80	.90	*	*	.81	.80	.90	*
Internal Control	.68	.83	.90	*	*	.78	.83	.90	*
Trust in People	.69	.88	.91	*	*	.78	.88	.91	*
Trust in Government	.69	.75	.74	.59	.23	.78	.75	.74	.88
Interest in Government	.73	.96	.86	.79	.47	.81	.96	.86	.94

Table F-1 (Cont.)

Variable	Stability Between Data Collection ^a					Annual Stability ^b			
	S ₁₂	S ₂₃	S ₃₄	S ₄₅	S ₁₅	S ₁₂	S ₂₃	S ₃₄	S ₄₅
Racial: Strong Govt.	*	*	.99 ^c	.61	*	*	*	.99 ^c	.88
Racial: Social Dist.	*	*	.82	.57	*	*	*	.82	.87
Racial: Perceived Disc.	*	*	.76	.79	*	*	*	.76	.94
Vietnam Dissent	*	*	.74	.72	*	*	*	.74	.92
Job That Pays Off	.65	.76	.76	.66	.25	.75	.76	.76	.90
Job That Doesn't Bug	.78	.90	.89	.68	.42	.84	.90	.89	.91
Ambitious Job Attitudes	.72	.83	.84	.56	.28	.81	.83	.84	.86
Status of Aspired Occup.	.86	.92	.88	.80	.56	.91	.92	.88	.95
Delinquent Behavior-Sch.	.72	.76	*	*	*	.80	.76	*	*
Seriousness of Delinq.	.84	.87	.90	.65	.43	.89	.87	.90	.90
Interpers. Aggression	.79	.87	.90	.68	.42	.86	.87	.90	.91
Theft and Vandalism	.82	.90	.86	.61	.39	.88	.90	.86	.88

Note: * indicates that the variable was not measured at the relevant data collection(s).

^a Stability estimates were derived by following procedures suggested by Heise (1969). S₁₂ is the estimated stability between times 1 and 2. Time intervals between successive data collections are as follows: Time 1 to 2, 18 months; Time 2 to 3, 12 months; Time 3 to 4, 12 months; Time 4 to 5, 48 months.

^b Annual stability estimates were derived by assuming constant stabilities across longer time intervals.

^c This figure is unrealistically high. The correlation between the Time 3 and Time 4 measures is actually greater than the correlation between the Time 3 and Time 5 measures; this condition violates basic assumptions underlying the computation of the stability coefficients.

APPENDIX G

MATRIX OF INTERCORRELATIONS AMONG MEASURES

UNPAIRED MEANS AND STANDARD DEVIATIONS

VARIABLE NAME	VARIABLE NO.	ADJUSTED N	ADJUSTED WT. SUM	SUM X	SUM X2	MEAN X	S. D. X	
NUMBER YEARS SCHOOLING	5	1	1616	1616	7.5820000E+03	4.1822000E+04	4.692	1.967
EDUCATION ATTAINED 1-8	5	2	1628	1628	6.9060000E+03	3.6970000E+04	4.242	2.172
JOB STATUS-DUNCAN	5	3	1423	1423	5.2300000E+04	2.6759460E+06	36.753	23.023
EMPLOYED? YES=1, NO=0	5	4	1321	1321	1.2090000E+03	1.2090000E+03	0.915	0.279
HOURLY PAY RATE	5	5	1541	1541	5.8878600E+05	2.6660475E+08	382.080	164.438
JOB SATISFACTION	5	6	1605	1605	5.8180000E+03	2.2996000E+04	3.625	1.090
COLLEGE STATUS RANKING	5	7	881	881	2.9230000E+03	1.3959000E+04	3.319	2.200
COLLEGE GRAD ACT SCORE	5	8	878	878	1.9100000E+04	4.2372600E+05	21.754	3.062
MILITARY SERVICE=1	5	9	1502	1502	3.7800000E+02	3.7800000E+02	0.252	0.434
MARRIED YES=1, NO=0	5	10	1602	1602	7.5800000E+02	7.5800000E+02	0.473	0.499
MARRIED PART=1	5	11	1545	1545	3.5000000E+02	3.5000000E+02	0.227	0.419
MARRIED NONPART=1	5	12	1545	1545	4.0800000E+02	4.0800000E+02	0.264	0.441
URBANICITY 1-4	5	13	1619	1619	3.4350000E+03	9.5150000E+03	2.122	1.173
FAMILY SOCIOECONOM LEVEL	1	14	1586	1586	8.0528900E+05	4.1884877E+08	507.748	79.289
FATHER'S OCCUPATION	1	15	1466	1466	5.7733000E+04	3.1146050E+06	39.381	23.960
FATHER'S EDUCATION	1	16	1490	1490	5.6410000E+03	2.8225000E+04	3.786	2.148
MOTHER'S EDUCATION	1	17	1544	1544	5.9670000E+03	2.7941000E+04	3.865	1.779
POSSESSIONS IN HOME	1	18	1592	1592	2.5139000E+04	4.0572900E+05	15.791	2.347
NUMBER BOOKS IN HOME	1	19	1601	1601	5.7740000E+03	2.2954000E+04	3.606	1.154
BOOKS/PERSON IN HOME	1	20	1547	1547	3.0604600E+05	7.1076352E+07	197.832	82.532
NUMBER OF SIBLINGS	1	21	1628	1628	4.5260000E+03	1.7882000E+04	2.780	1.805
LIVES W/ BOTH PARENTS=1	1	22	1628	1628	1.3480000E+03	1.3480000E+03	0.828	0.377
PARENTAL PUNITIVENESS	1	23	1603	1603	3.6983400E+05	9.2591328E+07	230.714	67.345
BLACK:SEG SCHL, SOUTH=1	1	24	1600	1600	6.8000000E+01	6.8000000E+01	0.042	0.202
BLACK:SEG SCHL, NORTH=1	1	25	1600	1600	3.6000000E+01	3.6000000E+01	0.022	0.148
BLACK:INTEGRATED SCH=1	1	26	1600	1600	3.5000000E+01	3.5000000E+01	0.022	0.146
REGION:WEST=1	1	27	1628	1628	2.7300000E+02	2.7300000E+02	0.168	0.374
REGION:NORTH-CENTRAL=1	1	28	1628	1628	5.1500000E+02	5.1500000E+02	0.316	0.465
REGION:NORTH-EAST=1	1	29	1628	1628	3.6700000E+02	3.6700000E+02	0.225	0.418
REGION:SOUTH=1	1	30	1628	1628	4.7300000E+02	4.7300000E+02	0.291	0.454
RAISED ON FARM=0, NOT=1	1	31	1606	1606	1.6500000E+02	1.6500000E+02	0.103	0.304
ABILITY COMPOSITE	1	32	1628	1628	8.3299000E+04	4.3716910E+06	51.166	8.207
QUICK TEST	1	33	1628	1628	1.7855400E+05	1.9812592E+07	109.677	11.873
GATB-J VOCABULARY TEST	1	34	1626	1626	3.2025000E+04	6.9685100E+05	19.696	6.378

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YOUTH IN TRANSITION MATRIX, JUNE 1976

UNPAIRED MEANS AND STANDARD DEVIATIONS

VARIABLE NAME		VARIABLE NO.	ADJUSTED N	ADJUSTED WT. SUM	SUM X	SUM X2	MEAN X	S. D. X
GAIFF LEADING TEST	1	35	1625	1625	5.983900E+04	2.2512670E+06	36.824	5.423
PERFECTED GRADE:107=1	1	36	1626	1626	1.2990000E+03	1.2990000E+03	0.799	0.401
AVERAGE GRADE:107 Y	1	37	1622	1622	6.568800E+04	2.7420500E+06	40.498	7.104
AVERAGE GRADE:107 Y	2	34	1456	1456	5.859200E+04	2.4299720E+06	40.242	7.041
AVERAGE GRADE:107 Y	3	39	1351	1351	5.563000E+04	2.3598900E+06	41.177	7.161
# OF HOUSES HOMEWORK	1	40	1624	1624	1.793200E+04	2.732540E+05	11.042	6.809
# OF HOUSES HOMEWORK	2	41	1464	1464	1.464000E+04	2.313700E+05	9.973	7.628
# OF HOUSES HOMEWORK	3	42	1351	1351	4.024000E+03	1.426600E+04	2.979	1.300
PERFECT SENRY IN SCHOOL	1	43	1613	1613	3.277870E+05	7.121216E+07	203.216	53.423
PERFECT SENRY IN SCHOOL	2	44	1450	1450	3.067840E+05	6.893750E+07	211.575	53.127
CURRICULUM:COLL PRGP=1	1	45	1566	1566	7.240000E+02	7.240000E+02	0.462	0.499
CURRICULUM:COLL PRGP=1	2	46	1409	1409	7.000000E+02	7.000000E+02	0.497	0.500
CURRICULUM:COLL PRGP=1	3	47	1411	1411	6.630000E+02	6.630000E+02	0.470	0.499
COLLEGE PLANS? YES=1	1	48	1628	1628	9.940000E+02	9.940000E+02	0.611	0.488
COLLEGE PLANS? YES=1	2	49	1516	1516	9.910000E+02	9.910000E+02	0.654	0.476
COLLEGE PLANS? YES=1	3	50	1491	1491	8.170000E+02	8.170000E+02	0.548	0.498
INTEREST IN COURSES	1	51	1620	1620	4.263000E+03	1.236700E+04	2.631	0.842
INTEREST IN COURSES	2	52	1428	1428	3.791000E+03	1.098900E+04	2.655	0.805
INTEREST IN COURSES	3	53	1355	1355	3.424000E+03	1.195000E+04	2.922	0.925
POSITIVE SCH ATTITUDES	1	54	1618	1618	5.268800E+05	1.7593914E+08	325.641	51.941
POSITIVE SCH ATTITUDES	2	55	1443	1443	4.593610E+05	1.5015851E+08	318.337	52.183
POSITIVE SCH ATTITUDES	3	56	1345	1345	4.093640E+05	1.2866610E+08	304.360	55.044
NEGATIVE SCH ATTITUDES	1	57	1609	1609	3.022530E+05	6.2503952E+07	187.851	59.670
NEGATIVE SCH ATTITUDES	2	58	1443	1443	2.622480E+05	5.2162160E+07	181.738	55.874
NEGATIVE SCH ATTITUDES	3	59	1344	1344	2.564940E+05	5.3005456E+07	190.844	54.950
ACADEMIC ACHIEVEMENT VALUE	1	60	1566	1566	8.024750E+05	4.2022477E+08	512.436	75.866
ACADEMIC ACHIEVEMENT VALUE	2	61	1465	1465	7.343250E+05	3.7551232E+08	501.246	71.264
ACADEMIC ACHIEVEMENT VALUE	3	62	1467	1467	7.219000E+05	3.6248013E+08	492.093	70.267
SELF-CONCEPT SCHL ABIL	1	63	1624	1624	6.760070E+05	2.9030323E+08	416.260	74.086
SELF-CONCEPT SCHL ABIL	2	64	1448	1448	6.131640E+05	2.6812949E+08	423.456	76.561
DOES BEST WORK IN SCHL	1	65	1628	1628	5.144000E+03	1.747800E+04	3.160	0.868
DOES BEST WORK IN SCHL	2	66	1459	1458	4.371000E+03	1.407700E+04	2.998	0.817
WORKS HARDER THAN AVG	1	67	1627	1627	4.899700E+03	1.543500E+04	3.011	0.648
WORKS HARDER THAN AVG	2	68	1458	1458	4.204000E+03	1.287200E+04	2.983	0.718
SATIS W OWN SCHL WORK	1	69	1628	1628	4.518000E+03	1.394600E+04	2.775	0.930
SATIS W OWN SCHL WORK	2	70	1459	1459	4.085000E+03	1.258500E+04	2.800	0.887
SELF-ESTEEM	1	71	1622	1622	6.065010E+05	2.3115384E+08	373.922	51.922
SELF-ESTEEM	2	72	1501	1501	5.747670E+05	2.2363630E+08	382.923	48.614
SELF-ESTEEM	3	73	1492	1492	5.793120E+05	2.2970082E+08	388.279	50.259
SELF-ESTEEM	4	74	1409	1409	5.494390E+05	2.1779408E+08	390.227	49.074
SELF-ESTEEM	5	75	1594	1594	6.731320E+05	2.4786122E+08	422.291	47.555
FEEL SOCIAL APPROVAL	1	76	1613	1613	2.372800E+05	3.5404976E+07	147.379	16.441
FEEL ANXIETY	1	77	1612	1612	2.402520E+05	3.6730176E+07	149.040	23.937
FEEL ANXIETY	2	78	1449	1448	2.074620E+05	3.0542048E+07	143.275	23.776
NEED SELF-DEVELOPMENT	1	79	1622	1622	5.999000E+05	2.1909622E+08	363.692	52.989
NEED SELF-DEVELOPMENT	2	80	1496	1496	5.439100E+05	2.0146176E+08	363.576	49.809
NEED SELF-DEVELOPMENT	3	81	1482	1482	5.346450E+05	1.9999018E+08	364.133	48.528
NEED SELF-DEVELOPMENT	4	82	1409	1409	5.108440E+05	1.8935976E+08	363.843	49.873
NEED SELF-UTILIZATION	1	83	1623	1623	6.208630E+05	2.4648507E+08	386.237	51.889
NEED SELF-UTILIZATION	2	84	1502	1502	5.734310E+05	2.2261549E+08	381.774	49.595
NEED SELF-UTILIZATION	3	85	1494	1494	5.733280E+05	2.2363202E+08	383.754	49.209

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YOUTH IN TRANSITION MATRIX, JUNE 1976

UNPAIRED MEANS AND STANDARD DEVIATIONS

VARIABLE NAME	VARIABLE NO.	ADJUSTED N	ADJUSTED WT. SUM	SUM X	SUM X2	MEAN X	S. D. X
NEED SELF-UTILIZATION	4	96	1407	1407	5.2771700E+05	2.0146158E+08	375.065
HAPPINESS	1	87	1621	1621	6.1018400E+05	2.3581138E+09	376.424
HAPPINESS	2	39	1501	1501	5.7125600E+05	2.2249456E+08	380.450
HAPPINESS	3	39	1494	1494	5.6300200E+05	2.1749614E+08	376.842
HAPPINESS	4	90	1406	1406	5.3116700E+05	2.0552909E+08	377.715
NEGATIVE AFFECT STATES	1	91	1618	1618	4.2421500E+05	1.1602747E+08	262.185
NEGATIVE AFFECT STATES	2	92	1490	1490	3.8159000E+05	1.0202203E+08	256.101
NEGATIVE AFFECT STATES	3	93	1476	1476	3.7525000E+05	9.9594208E+07	254.234
NEGATIVE AFFECT STATES	4	94	1472	1472	3.4945900E+05	9.6929472E+07	249.257
SOMATIC SYMPTOMS	1	95	1500	1500	3.5133500E+05	8.2327328E+07	219.597
SOMATIC SYMPTOMS	2	96	1500	1500	3.2359400E+05	7.4212348E+07	215.729
SOMATIC SYMPTOMS	3	97	1493	1493	3.2391900E+05	7.4515124E+07	216.958
SOMATIC SYMPTOMS	4	98	1413	1413	3.0150100E+05	6.8438848E+07	213.376
IMPULSE TO AGGRESSION	1	99	1591	1591	4.0382500E+05	1.1284995E+08	253.818
IMPULSE TO AGGRESSION	2	100	1480	1480	3.6142500E+05	9.4740560E+07	244.206
IMPULSE TO AGGRESSION	3	101	1455	1455	3.5972500E+05	9.5118064E+07	247.234
IMPULSE TO AGGRESSION	4	102	1394	1394	3.3077500E+05	8.3814512E+07	237.285
SOCIAL VALUES CLUSTER	1	103	1596	1596	7.5046900E+05	3.5804672E+09	470.219
SOCIAL VALUES CLUSTER	2	104	1469	1469	7.0863700E+05	3.4086886E+08	475.915
SOCIAL VALUES CLUSTER	3	105	1485	1485	7.0358000E+05	3.3653606E+08	473.791
SOCIAL VALUES CLUSTER	4	106	1470	1470	6.5820100E+05	3.1264794E+08	470.144
INTERNAL CONTROL	1	107	1597	1597	2.6593200E+05	4.4879248E+07	166.520
INTERNAL CONTROL	2	108	1495	1495	2.5445500E+05	4.3931744E+07	170.204
INTERNAL CONTROL	3	109	1493	1493	2.5453400E+05	4.4046896E+07	170.485
INTERNAL CONTROL	4	110	1404	1404	2.4064000E+05	4.1860848E+07	170.938
TRUST IN PEOPLE	1	111	1581	1581	2.4390000E+03	5.6910000E+03	1.543
TRUST IN PEOPLE	2	112	1491	1491	2.3570000E+03	5.7470000E+03	1.581
TRUST IN PEOPLE	3	113	1488	1488	2.2360000E+03	5.5000000E+03	1.503
TRUST IN PEOPLE	4	114	1400	1400	2.2890000E+03	5.8210000E+03	1.635
TRUST IN GOVERNMENT	1	115	1603	1603	5.8835800E+05	2.2270571E+08	367.035
TRUST IN GOVERNMENT	2	116	1500	1500	5.2928100E+05	1.9233803E+08	352.854
TRUST IN GOVERNMENT	3	117	1491	1491	5.1836400E+05	1.8544666E+08	347.662
TRUST IN GOVERNMENT	4	118	1402	1402	4.5753300E+05	1.5445413E+08	326.343
TRUST IN GOVERNMENT	5	119	1590	1590	4.7993200E+05	1.5076704E+08	321.844
INTEREST IN GOVERNMENT	1	120	1607	1607	5.4480000E+03	1.9808000E+04	3.390
INTEREST IN GOVERNMENT	2	121	1501	1501	5.3530000E+03	2.0221000E+04	3.566
INTEREST IN GOVERNMENT	3	122	1489	1489	5.2860000E+03	1.9928000E+04	3.550
INTEREST IN GOVERNMENT	4	123	1407	1407	5.2010000E+03	2.0295000E+04	3.697
INTEREST IN GOVERNMENT	5	124	1600	1600	5.5980000E+03	2.0904000E+04	3.499
GOVT SHLD END DISCRIM	3	125	1472	1472	4.8697000E+05	1.6708278E+08	330.822
GOVT SHLD END DISCRIM	4	126	1398	1398	4.7817800E+05	1.6833989E+08	341.973
GOVT SHLD END DISCRIM	5	127	1580	1580	5.5965900E+05	2.0307731E+08	354.214
SOCIAL DISTANCE (RACE)	3	128	1479	1479	2.0494300E+05	3.2734880E+07	138.569
SOCIAL DISTANCE (RACE)	4	129	1407	1407	1.8445000E+05	2.7774240E+07	131.095
SOCIAL DISTANCE (RACE)	5	130	1577	1577	1.8855600E+05	2.4877344E+07	119.566
PERCEIVED DISCRIMINATN	3	131	1488	1488	4.5938200E+05	1.4954231E+08	308.724
PERCEIVED DISCRIMINATN	4	132	1409	1409	4.4030000E+05	1.4482435E+08	312.491
PERCEIVED DISCRIMINATN	5	133	1586	1586	4.5624600E+05	1.4026557E+08	287.671
VIETNAM DISSENT	3	134	1466	1466	3.5041600E+05	8.7498736E+07	239.029
VIETNAM DISSENT	4	135	1405	1405	3.5457100E+05	9.4337104E+07	252.364
VIETNAM DISSENT	5	136	1571	1571	4.1551100E+05	1.1547632E+08	264.488

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YOUTH IN TRANSITION MATRIX, JUNE 1976

UNPAIRED MEANS AND STANDARD DEVIATIONS

VARIABLE	VARIABLE NO.	ADJUSTED N	ADJUSTED MEAN	SUM X	SUM X2	MEAN X	S. D. X
PPPP MORE MILITARY INFL	3	137	1477	4.060500E+03	1.1975250E+04	2.749	0.742
PPPP MORE MILITARY INFL	5	139	1575	4.186000E+03	1.231300E+04	2.659	0.869
ABOCTION DISAPPROVAL	4	139	1389	2.935000E+03	7.777000E+03	2.113	1.065
ABOCTION DISAPPROVAL	5	141	1581	3.184000E+03	8.496000E+03	2.014	1.149
POPULATION CONCERN	4	141	1399	4.4998320E+03	1.5692848E+04	3.216	0.666
POPULATION CONCERN	5	142	1562	5.045675E+03	1.769365E+04	3.230	0.714
IDEAL W/OUT CHILDREN	4	141	1360	3.619000E+03	1.284500E+04	2.808	1.249
IDEAL W/OUT CHILDREN	5	144	1568	3.882000E+03	1.182000E+04	2.476	1.187
JOB THAT PAYS OFF	1	145	1612	5.685000E+05	2.6312531E+08	352.575	41.213
JOB THAT PAYS OFF	2	146	1500	5.262450E+05	1.8700808E+08	350.833	39.893
JOB THAT PAYS OFF	3	147	1473	5.1224500E+05	1.8055691E+08	347.756	40.550
JOB THAT PAYS OFF	4	149	1407	4.8946100E+05	1.7269262E+08	347.875	41.497
JOB THAT PAYS OFF	5	149	1588	5.5666100E+05	1.9754970E+08	350.542	39.022
JOB THAT DOESNT BUG ME	1	150	1609	3.9092300E+05	1.0102661E+08	242.960	61.338
JOB THAT DOESNT BUG ME	2	151	1501	3.3493900E+05	8.0673088E+07	223.144	59.629
JOB THAT DOESNT BUG ME	3	152	1480	3.2429600E+05	7.5298896E+07	219.119	53.539
JOB THAT DOESNT BUG ME	4	153	1405	3.1298400E+05	7.4130032E+07	222.764	56.034
JOB THAT DOESNT BUG ME	5	154	1589	2.9430800E+05	5.8062112E+07	185.216	47.292
AMBITIOUS JOB ATTITUDE	1	155	1607	8.1917300E+05	4.2503731E+08	509.753	68.161
AMBITIOUS JOB ATTITUDE	2	156	1498	7.9064800E+05	4.2372966E+08	527.802	65.506
AMBITIOUS JOB ATTITUDE	3	157	1473	7.7912100E+05	4.1830912E+08	528.935	64.925
AMBITIOUS JOB ATTITUDE	4	158	1404	7.3747900E+05	3.9302758E+08	525.273	63.471
AMBITIOUS JOB ATTITUDE	5	159	1586	8.9684200E+05	5.1218944E+08	565.474	56.437
STATUS ASPIRED OCCUPAT	1	160	1231	7.6488000E+04	5.5802520E+06	62.132	25.948
STATUS ASPIRED OCCUPAT	2	161	1222	7.3228000E+04	5.1312180E+06	59.925	24.669
STATUS ASPIRED OCCUPAT	3	162	1271	7.4523000E+04	5.1461180E+06	58.637	24.719
STATUS ASPIRED OCCUPAT	4	163	1280	7.4508000E+04	5.1011340E+06	58.209	24.442
STATUS ASPIRED OCCUPAT	5	164	1360	7.4218000E+04	4.7943300E+06	54.569	23.406
DELINQ BEHAV IN SCHOOL	1	165	1581	2.3446600E+05	4.0638000E+07	148.302	60.932
DELINQ BEHAV IN SCHOOL	2	166	1501	2.2438100E+05	3.8839136E+07	149.488	59.425
DELINQ BEHAV IN SCHOOL	3	167	1495	2.3409100E+05	4.1977984E+07	156.583	59.692
SERIOUSNESS OF DELINQ	1	168	1582	2.2102700E+05	3.4972032E+07	139.714	50.872
SERIOUSNESS OF DELINQ	2	169	1502	1.9259000E+05	2.7807544E+07	128.222	45.542
SERIOUSNESS OF DELINQ	3	170	1495	1.9167500E+05	2.7407024E+07	128.211	43.540
SERIOUSNESS OF DELINQ	4	171	1376	1.8069200E+05	2.6515568E+07	131.317	45.027
SERIOUSNESS OF DELINQ	5	172	1595	1.9311300E+05	2.5373984E+07	121.074	35.360
INTERPERSONAL AGREEDEN	1	173	1581	2.4076000E+05	4.1840144E+07	152.283	57.238
INTERPERSONAL AGREEDEN	2	174	1502	1.8209000E+05	2.4494864E+07	121.232	40.151
INTERPERSONAL AGREEDEN	3	175	1494	1.7887300E+05	2.3620448E+07	119.728	38.425
INTERPERSONAL AGREEDEN	4	176	1376	1.6534400E+05	2.1923536E+07	120.163	38.663
INTERPERSONAL AGREEDEN	5	177	1595	1.8104700E+05	2.2205696E+07	113.509	32.224
THEFT AND VANDALISM	1	178	1583	2.4547800E+05	4.3404528E+07	155.071	58.087
THEFT AND VANDALISM	2	179	1502	2.0900100E+05	3.3354784E+07	139.148	53.353
THEFT AND VANDALISM	3	180	1495	2.0726100E+05	3.2571760E+07	138.636	50.684
THEFT AND VANDALISM	4	181	1376	1.9814600E+05	3.2501440E+07	144.001	53.721
THEFT AND VANDALISM	5	182	1596	2.0275200E+05	2.8634080E+07	127.033	42.470
DAILY CIGARETTE USE=1	3	183	1365	4.7100000E+02	4.7100000E+02	0.345	0.476
DAILY CIGARETTE USE=1	4	184	1366	5.3900000E+02	5.3900000E+02	0.395	0.489
DAILY CIGARETTE USE=1	5	185	1595	7.2900000E+02	7.2900000E+02	0.457	0.498
ALCOHOL USE 1-4	3	186	1364	4.6590000E+03	1.9231000E+04	3.406	1.569
ALCOHOL USE 1-4	4	187	1365	5.3050000E+03	2.3513000E+04	3.886	1.457

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YOUTH IN TRANSITION MATRIX, JUNE 1976

UNPAIRED MEANS AND STANDARD DEVIATIONS

VARIABLE NAME	VARIABLE NO.	ADJUSTED N	ADJUSTED WT. SUM	SUM X	SUM X2	MEAN X	S. D. X
ALCOHOL USE 1-6	5	193	1599	6.9470000E+03	3.3075000E+04	4.345	1.346
MARIJUANA USE 1-6	3	189	1362	2.0700000E+03	5.0420000E+03	1.520	1.180
MARIJUANA USE 1-6	4	191	1370	2.5610000E+03	7.5750000E+03	1.869	1.427
MARIJUANA USE 1-6	5	191	1586	4.0920000E+03	1.5874000E+04	2.580	1.831
DRUG USE: AMPH, BARB, LSD	3	192	1369	1.5842461E+03	2.2766724E+03	1.157	0.569
DRUG USE: AMPH, BARB, LSD	4	193	1369	1.6646319E+03	2.5447937E+03	1.219	0.611
DRUG USE: AMPH, BARB, LSD	5	194	1594	2.0513462E+03	3.2626599E+03	1.287	0.625
SCHOOL YEAR S.E.L.	1	195	1628	8.1928169E+05	4.1507610E+08	563.244	41.316
SCHOOL YEAR QUICK TEST	1	195	1628	1.7703569E+05	1.9449440E+07	109.113	6.422
SCHOOL YEAR GATE-J	1	197	1628	3.1312262E+04	6.1772081E+05	19.234	3.084
SCHOOL YEAR GATES	1	198	1628	5.9219828E+04	2.1684530E+06	36.376	2.963
PARTICIPANT IN 1970=1	4	199	1628	1.4280000E+03	1.4280000E+03	0.877	0.328

*** OUTPUT CORRELATION MATRIX ***

	VAR	1	2	3	4	5	6	7	8	9	10	11
EDUCATION ATTAINED 1-4	5	2	0.8944									
JOB STATUS-DUNCAN	5	3	0.3919	0.4140								
EMPLOYED? YES=1, NO=0	5	4	0.0459	0.0633	0.1235							
HOURLY PAY RATE	5	5	-0.0687	-0.0532	0.1042	0.0924						
JOB SATISFACTION	5	6	-0.0110	-0.0092	0.2214	0.1856	0.1388					
COLLEGE STATUS PARKING	5	7	0.4916	0.4916	0.1502	-0.0494	-0.0324	-0.0314				
COLLEGE MEAN ACT SCORE	5	8	0.3974	0.3837	0.1606	-0.0579	0.0036	-0.0381	0.7704			
MILITARY SERVICE=1	5	9	-0.3947	-0.3380	-0.1950	-0.1635	-0.0541	-0.0420	-0.1587	-0.1205		
MARRIED? YES=1, NO=0	5	10	-0.2563	-0.2386	-0.0414	0.1445	0.1112	0.1376	-0.1552	-0.1806	0.0816	
MARRIED PARENT=1	5	11	-0.3556	-0.3336	-0.1455	0.0790	0.1051	0.0700	-0.2167	-0.1867	0.0713	0.5514
MARRIED NONPARENT=1	5	12	0.0204	0.0210	0.0823	0.0730	0.0308	0.0914	-0.0266	-0.0688	0.0473	0.6104
URBAN/CITY 1-4	5	13	0.1652	0.1799	0.1327	-0.0676	0.0484	-0.0837	0.1379	0.1541	-0.0384	-0.1491
FAMILY SOCIOECON LEVEL	1	14	0.4679	0.4666	0.2015	-0.0026	-0.0322	-0.0260	0.2773	0.2812	-0.1849	-0.1511
FATHERS OCCUPATION	1	15	0.3192	0.3323	0.1389	-0.0285	-0.0246	-0.0391	0.1676	0.1839	-0.1210	-0.0977
FATHERS EDUCATION	1	16	0.3791	0.3731	0.1518	-0.0303	-0.0587	-0.0655	0.2247	0.2289	-0.1904	-0.1298
MOTHERS EDUCATION	1	17	0.3597	0.3644	0.1436	0.0069	-0.0649	-0.0499	0.2217	0.2430	-0.1499	-0.1516
POSSESSIONS IN HOME	1	18	0.2986	0.2961	0.1458	0.0052	0.0159	0.0435	0.1344	0.1171	-0.0642	-0.0700
NUMBER BOOKS IN HOME	1	19	0.2910	0.2653	0.0770	0.0093	-0.0301	-0.0117	0.1634	0.1762	-0.0695	-0.1039
FOCUS/PERSON IN HOME	1	20	0.2595	0.2569	0.1512	0.0194	0.0077	0.0038	0.1914	0.1679	-0.1536	-0.0657
NUMBER OF SIBLINGS	1	21	-0.2923	-0.2973	-0.1901	-0.0688	0.0091	-0.0083	-0.1427	-0.1466	0.1396	0.1263
LIVES W BOTH PARENTS=1	1	22	0.1124	0.1003	0.0120	0.0148	-0.0037	-0.0144	0.0782	0.0582	-0.0377	-0.0260
PARENTAL PUNITIVENESS	1	23	-0.1974	-0.2015	-0.1004	-0.0654	0.0107	0.0037	-0.1100	-0.0425	0.1113	-0.0000
BLACK: NEG SCHL, SOUTH=1	1	24	-0.1399	-0.1605	-0.1203	-0.0241	-0.0862	-0.0078	-0.0059	-0.1314	-0.0036	0.0046
BLACK: NEG SCHL, NORTH=1	1	25	-0.1655	-0.1662	-0.0412	-0.0465	-0.0096	-0.0479	-0.0306	-0.0350	0.0105	-0.0273
BLACK: INTEGRATED SCH=1	1	26	0.0035	-0.0048	0.0029	-0.0705	-0.0106	-0.0123	-0.0098	-0.0064	-0.0049	-0.0623
REGIONALIST=1	1	27	-0.0412	-0.0364	-0.0843	-0.0178	0.0094	-0.0112	-0.0867	0.0408	0.0599	-0.0141
REGION: NON-CENTRAL=1	1	28	-0.0270	-0.0220	-0.0385	-0.0274	0.0457	-0.0273	-0.0165	-0.0085	0.0219	0.0044

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*** OUTPUT CORRELATION MATRIX ***

		VAR	1	2	3	4	5	6	7	8	9	10	11
REGION:NORTHEAST=1	1	29	0.1141	0.1051	0.1467	-0.0556	0.0168	0.0016	0.0940	0.1850	-0.0387	-0.1161	-0.1075
REGION:SOUTH=1	1	30	-0.0438	-0.0433	-0.0270	0.0948	-0.0699	0.0358	0.0000	-0.2050	-0.0366	0.1143	0.0657
RAISED ON FARM=1, NOT=1	1	31	-0.0375	-0.0890	-0.0744	0.0450	-0.0063	0.0444	-0.0530	-0.0583	-0.0359	0.0728	0.0501
ABILITY COMPOSITE	1	32	0.4971	0.5295	0.3044	0.0255	-0.0255	-0.0701	0.4188	0.3814	-0.1359	-0.1254	-0.2241
QUICK TEST	1	33	0.4132	0.4243	0.2290	0.0234	-0.0321	-0.0781	0.3248	0.3063	-0.0856	-0.1205	-0.2198
GATE-J VOCABULARY TEST	1	34	0.4776	0.5197	0.2919	0.0329	-0.0262	-0.0493	0.4147	0.3467	-0.1660	-0.1365	-0.2068
GATES READING TEST	1	35	0.4242	0.4554	0.2756	0.0099	-0.0141	-0.0573	0.3242	0.3191	-0.1071	-0.0751	-0.1638
REPEATED GRADE=0, NOT=1	1	36	0.3606	0.3510	0.1565	0.0156	-0.0301	-0.0027	0.2145	0.1890	-0.2750	-0.1161	-0.1686
AVERAGE GRADE:9TH YR	1	37	0.4972	0.5295	0.3174	0.0188	-0.0394	0.0163	0.3773	0.2771	-0.2106	-0.1087	-0.1944
AVERAGE GRADE:10TH YR	2	38	0.4843	0.5034	0.2908	-0.0141	-0.0151	0.0249	0.4193	0.3393	-0.1992	-0.0497	-0.1551
AVERAGE GRADE:12TH YR	3	39	0.4875	0.5011	0.2956	0.0411	0.0371	0.0470	0.3928	0.3312	-0.1897	-0.0390	-0.1104
# OF HOURS HOMEWORK	1	40	0.1526	0.1566	0.1227	0.0561	-0.0177	0.0528	0.1071	0.0808	-0.1034	-0.0125	-0.0531
# OF HOURS HOMEWORK	2	41	0.1655	0.1652	0.0903	0.0265	-0.0407	0.0578	0.0920	0.0982	-0.0604	-0.0748	-0.1000
# OF HOURS HOMEWORK	3	42	0.2681	0.2708	0.1182	-0.0147	-0.0489	0.0534	0.1887	0.1804	-0.0340	-0.0922	-0.0984
REBEL BEHAV IN SCHOOL	1	43	-0.2827	-0.2845	-0.1827	-0.1085	0.0366	-0.0645	-0.1444	-0.0448	0.0920	0.0670	0.1443
REBEL BEHAV IN SCHOOL	2	44	-0.2614	-0.2664	-0.1532	-0.0610	0.0282	-0.0663	-0.1381	-0.0915	0.0987	0.0826	0.1607
CURRICULUM:COLL PREP=1	1	45	0.4404	0.4476	0.2573	-0.0097	0.0166	-0.0507	0.2366	0.1748	-0.1828	-0.1391	-0.1984
CURRICULUM:COLL PREP=1	2	46	0.5316	0.5399	0.2670	-0.0259	0.0046	-0.0545	0.3293	0.2580	-0.2408	-0.1858	-0.2397
CURRICULUM:COLL PREP=1	3	47	0.5428	0.5487	0.2687	0.0101	-0.0457	-0.0244	0.3433	0.3354	-0.2098	-0.2095	-0.2515
COLLEGE PLANS? YES=1	1	48	0.4512	0.4452	0.2317	0.0351	-0.0364	-0.0460	0.2127	0.1590	-0.1998	-0.1288	-0.1549
COLLEGE PLANS? YES=1	2	49	0.4433	0.4451	0.2042	-0.0096	0.0122	-0.0162	0.1489	0.0879	-0.2315	-0.1092	-0.2090
COLLEGE PLANS? YES=1	3	50	0.6473	0.6656	0.2969	0.0455	-0.0339	-0.0315	0.2496	0.1840	-0.2832	-0.1732	-0.2782
INTEREST IN COURSES	1	51	-0.1283	-0.1042	-0.0620	0.0184	0.0172	-0.1110	-0.0874	-0.0353	0.0686	0.0102	0.0612
INTEREST IN COURSES	2	52	-0.0837	-0.0816	-0.0190	-0.0228	0.0209	-0.1372	-0.0473	-0.0229	0.0151	-0.0057	0.0262
INTEREST IN COURSES	3	53	-0.0423	-0.0396	-0.0548	-0.0143	0.0093	-0.1371	-0.0056	0.0156	-0.0398	-0.0761	-0.0353
POSITIVE SCI ATTITUDES	1	54	0.2467	0.2473	0.1282	0.0106	-0.0725	0.0775	0.1096	0.0057	-0.0895	-0.0344	-0.1149
POSITIVE SCI ATTITUDES	2	55	0.2591	0.2554	0.0980	0.0090	-0.0184	0.0972	0.1070	0.0271	-0.0858	-0.0149	-0.1123

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*** OUTPUT CORRELATION MATRIX ***

	VAR	1	2	3	4	5	6	7	8	9	10	11
POSITIVE SCH ATTITUDES 3	56	0.2043	0.2098	0.1138	0.0519	-0.0015	0.1111	0.0666	-0.0062	-0.0217	0.0343	-0.0168
NEGATIVE SCH ATTITUDES 1	57	-0.3655	-0.3853	-0.2019	-0.0393	0.0930	-0.0165	-0.1803	-0.0667	0.0879	0.0822	0.1708
NEGATIVE SCH ATTITUDES 2	58	-0.3034	-0.3032	-0.1573	-0.0198	0.0482	-0.0359	-0.1990	-0.1262	0.1294	0.0208	0.1044
NEGATIVE SCH ATTITUDES 3	59	-0.3113	-0.3266	-0.1748	-0.0579	0.0736	-0.0249	-0.1597	-0.0844	0.1004	0.0546	0.1048
ACADEMIC ACHVMENT VALUE 1	60	0.2411	0.2309	0.1506	0.0704	-0.0376	0.0320	0.0459	0.0290	-0.0971	-0.0867	-0.1341
ACADEMIC ACHVMENT VALUE 2	61	0.1271	0.1224	0.0614	0.0096	-0.0217	0.0617	0.0223	-0.0308	-0.0766	-0.0107	-0.0450
ACADEMIC ACHVMENT VALUE 3	62	-0.0117	0.0049	0.0464	0.0755	0.0002	0.1048	-0.0344	-0.0904	0.0137	0.0492	0.0466
SELF-CONCEPT SCHL ABIL 1	63	0.4326	0.4480	0.2368	0.0347	-0.0312	-0.0201	0.3507	0.2991	-0.1819	-0.1263	-0.1761
SELF-CONCEPT SCHL ABIL 2	64	0.4345	0.4462	0.2077	-0.0357	-0.0210	-0.0406	0.3659	0.2909	-0.1575	-0.0907	-0.1724
DOES BEST WORK IN SCHL 1	65	0.1335	0.1422	0.1131	0.0033	-0.0817	0.0683	0.1521	0.1446	-0.0908	-0.0476	-0.0666
DOES BEST WORK IN SCHL 2	66	0.1532	0.1392	0.0802	0.6245	0.0042	0.0992	0.2591	0.2114	-0.0811	-0.0346	-0.0719
WORKS HARDER THAN AVG 1	67	0.2427	0.2469	0.1408	0.0327	-0.0594	0.0312	0.2152	0.1614	-0.1209	-0.0521	-0.0896
WORKS HARDER THAN AVG 2	68	0.2697	0.2554	0.1239	0.0034	0.0001	0.0697	0.1606	0.1224	-0.1381	-0.0411	-0.0750
SATIS W OWN SCHL WORK 1	69	0.1772	0.2037	0.1022	-0.0257	-0.0307	0.0627	0.1600	0.1583	-0.0842	-0.0117	-0.0632
SATIS W OWN SCHL WORK 2	70	0.1820	0.1986	0.0491	0.0155	-0.0370	0.0989	0.1857	0.1669	-0.0752	-0.0174	-0.0777
SELF-ESTEEM 1	71	0.2508	0.2721	0.1532	0.0348	-0.0090	0.0369	0.1545	0.1169	-0.1382	-0.0355	-0.1084
SELF-ESTEEM 2	72	0.1882	0.2053	0.1261	0.0032	0.0579	0.0697	0.1201	0.1067	-0.0904	0.0370	-0.0359
SELF-ESTEEM 3	73	0.1912	0.2093	0.1364	0.0485	0.0425	0.0623	0.1022	0.0886	-0.0635	0.0595	-0.0103
SELF-ESTEEM 4	74	0.1454	0.1706	0.1971	-0.0113	0.0775	0.0953	0.0444	0.0573	0.0001	0.0456	-0.0162
SELF-ESTEEM 5	75	0.1352	0.1402	0.1558	0.1014	0.0493	0.1773	0.0267	0.0235	-0.0011	0.0745	0.0315
NEED SOCIAL APPROVAL 1	76	0.0022	0.0023	0.0399	0.0470	-0.0095	0.0344	-0.0022	-0.0466	0.0167	0.0543	-0.0048
TEST ANXIETY 4.27 1	77	-0.1347	-0.1606	-0.0839	0.0415	0.0551	0.0336	-0.1144	-0.1064	0.0381	0.0330	0.0609
TEST ANXIETY 2	78	-0.1113	-0.1329	-0.0478	0.0441	-0.0062	-0.0098	-0.0858	-0.1077	0.0481	0.0122	0.0344
NEED SELF-DEVELOPMENT 1	79	0.2549	0.2766	0.1941	-0.0142	-0.0155	0.0285	0.1708	0.1293	-0.1119	-0.0486	-0.1202
NEED SELF-DEVELOPMENT 2	80	0.2323	0.2447	0.1333	-0.0283	0.0280	0.0111	0.1263	0.0809	-0.0659	0.0281	-0.0503
NEED SELF-DEVELOPMENT 3	81	0.2072	0.2387	0.1662	0.0552	0.0176	0.0070	0.1036	0.0681	-0.0447	0.0220	-0.0213
NEED SELF-DEVELOPMENT 4	82	0.1293	0.1523	0.1676	0.0419	0.0532	0.0661	-0.0093	0.0016	0.0222	0.0735	0.0026

*** OUTPUT CORRELATION MATRIX ***

		VAR	1	2	3	4	5	6	7	8	9	10	11
NEED SELF-UTILIZATION	1	83	0.1855	0.2113	0.1691	-0.0371	0.0602	-0.0084	0.0635	0.0389	-0.0798	-0.0483	-0.1051
NEED SELF-UTILIZATION	2	84	0.1867	0.1996	.1254	-0.0333	0.0201	-0.0052	0.0909	0.0768	-0.0432	-0.0099	-0.0440
NEED SELF-UTILIZATION	3	85	0.1710	0.1923	0.1505	0.0152	0.0175	-0.0104	0.0163	-0.0047	-0.0139	0.0063	-0.0261
NEED SELF-UTILIZATION	4	86	0.1112	0.1231	0.1437	0.0328	0.0097	0.0405	-0.0428	-0.0187	0.0216	0.0308	-0.0221
HAPPINESS	1	87	0.1029	0.1269	0.0745	0.0476	-0.0351	0.1001	0.0722	0.0014	-0.0718	0.0402	-0.0322
HAPPINESS	2	88	0.0673	0.0895	0.0404	0.0010	0.0206	0.1391	-0.0188	-0.0393	-0.0437	0.0596	-0.0119
HAPPINESS	3	89	0.0514	0.0754	0.0671	0.0571	-0.0017	0.1419	-0.0302	-0.0363	-0.0024	0.1001	0.0159
HAPPINESS	4	90	0.0098	0.0373	0.1091	0.0128	0.0081	0.1677	-0.0691	-0.0594	0.0072	0.1161	0.0180
NEGATIVE AFFECT STATES	1	91	-0.1518	-0.1743	-0.0979	-0.0170	0.0269	-0.0262	-0.0748	-0.0155	0.0539	-0.0048	0.0662
NEGATIVE AFFECT STATES	2	92	-0.0681	-0.0901	-0.0391	-0.0285	-0.0284	-0.0874	-0.0320	0.0055	0.0506	-0.0646	0.0054
NEGATIVE AFFECT STATES	3	93	-0.1013	-0.1200	-0.0565	-0.0170	-0.0012	-0.0817	-0.0463	-0.0320	0.0298	-0.0521	0.0240
NEGATIVE AFFECT STATES	4	94	-0.0692	-0.0929	-0.1060	-0.0122	-0.0139	-0.1067	-0.0111	-0.0191	0.0133	-0.0701	0.0138
SOMATIC SYMPTOMS	1	95	-0.2323	-0.2545	-0.1229	-0.0264	0.0165	0.0123	-0.1236	-0.0817	0.0834	0.0504	0.1197
SOMATIC SYMPTOMS	2	96	-0.2039	-0.2200	-0.1232	-0.0350	-0.0232	-0.0334	-0.1139	-0.0874	0.0805	0.0241	0.1380
SOMATIC SYMPTOMS	3	97	-0.1890	-0.1953	-0.1163	-0.0410	-0.0506	-0.0352	-0.0994	-0.0802	0.0948	0.0227	0.0873
SOMATIC SYMPTOMS	4	98	-0.1871	-0.2000	-0.1445	-0.0383	-0.0370	-0.0631	-0.1118	-0.1015	-0.0163	0.0467	0.1385
IMPULSE TO AGGRESSION	1	99	-0.1645	-0.1738	-0.1069	-0.0246	0.0646	-0.0540	-0.0543	0.0181	0.0529	0.0229	0.0752
IMPULSE TO AGGRESSION	2	100	-0.0454	-0.0631	-0.0245	-0.0519	-0.0201	-0.0702	0.0050	0.0414	0.0215	-0.0295	0.0213
IMPULSE TO AGGRESSION	3	101	-0.0017	-0.0244	-0.0110	-0.0446	-0.0039	-0.0625	0.0454	0.0613	0.0177	-0.0553	-0.0212
IMPULSE TO AGGRESSION	4	102	0.0587	0.0419	-0.0264	-0.0378	-0.0215	-0.1084	0.0874	0.0766	-0.0552	-0.0760	-0.0242
SOCIAL VALUES CLUSTER	1	103	0.2293	0.2269	0.1544	0.0617	-0.0376	0.0572	0.1153	0.0298	-0.0861	-0.0384	-0.1152
SOCIAL VALUES CLUSTER	2	104	0.1616	0.1786	0.1231	0.0331	0.0067	0.0673	0.0157	-0.0524	-0.0573	0.0316	-0.0544
SOCIAL VALUES CLUSTER	3	105	0.0915	0.1134	0.1243	0.0690	-0.0178	0.0846	-0.0473	-0.0896	-0.0321	0.0448	0.0081
SOCIAL VALUES CLUSTER	4	106	0.0227	0.0397	0.0739	0.0275	-0.0221	0.1025	-0.0936	-0.0909	0.0441	0.0627	0.0128
INTERNAL CONTROL	1	107	0.2370	0.2472	0.1497	0.0148	-0.0643	-0.0186	0.1385	0.0867	-0.0864	-0.0207	-0.0474
INTERNAL CONTROL	2	108	0.1860	0.1993	0.0310	-0.0089	-0.0003	0.0251	0.0694	0.0423	-0.0722	0.0065	-0.0563
INTERNAL CONTROL	3	109	0.1116	0.1290	0.0682	0.0614	0.0004	0.0175	0.0788	0.0300	-0.0153	0.0607	0.0116

*** OUTPUT CORRELATION MATRIX ***

	VAR	1	2	3	4	5	6	7	8	9	10	11
INTERNAL CONTROL	4 110	0.0741	0.0994	0.1003	0.0534	0.0109	0.0904	-0.0067	-0.0372	0.0314	0.0521	-0.0179
TRUST IN PEOPLE	1 111	0.0571	0.0623	0.0264	0.0306	0.0167	0.0458	-0.0010	-0.0144	-0.0216	0.0391	-0.0019
TRUST IN PEOPLE	2 112	0.0464	0.0485	0.0546	0.0182	-0.0066	0.0537	-0.0011	-0.0161	-0.0391	0.0370	0.0214
TRUST IN PEOPLE	3 113	0.1274	0.1237	0.0950	0.0158	0.0422	0.0479	0.0237	0.0163	-0.0513	0.0360	-0.0331
TRUST IN PEOPLE	4 114	0.0756	0.0921	0.0725	0.0116	0.0428	0.0689	-0.0145	-0.0080	-0.0909	0.0229	-0.0235
TRUST IN GOVERNMENT	1 115	0.1142	0.1209	0.0919	-0.0238	0.0112	0.0384	0.0492	-0.0065	-0.0474	-0.0321	-0.0449
TRUST IN GOVERNMENT	2 116	0.0405	0.0552	0.0265	0.0252	-0.0225	0.0316	0.0292	-0.0193	0.0160	0.0131	-0.0184
TRUST IN GOVERNMENT	3 117	0.0524	0.0735	0.0377	0.0482	0.0019	0.0480	-0.0190	-0.0828	0.0578	0.0255	0.0064
TRUST IN GOVERNMENT	4 118	-0.0642	-0.0562	0.0094	0.0475	0.0136	0.0608	-0.0842	-0.1528	0.0643	0.0544	0.0317
TRUST IN GOVERNMENT	5 119	-0.0488	-0.0279	0.0257	0.0608	-0.0030	0.0842	-0.1110	-0.1303	0.0885	0.0543	0.0285
INTEREST IN GOVERNMENT	1 120	0.1467	0.1284	0.0695	0.0347	-0.0273	0.0142	0.1624	0.1083	-0.0787	-0.0452	-0.0263
INTEREST IN GOVERNMENT	2 121	0.2355	0.2402	0.1453	0.0131	-0.0191	-0.0038	0.1653	0.1345	-0.0697	-0.0151	-0.0353
INTEREST IN GOVERNMENT	3 122	0.2054	0.2089	0.0976	-0.0036	-0.0404	-0.0185	0.1369	0.1397	-0.0739	-0.0359	-0.0633
INTEREST IN GOVERNMENT	4 123	0.1967	0.2068	0.0595	0.0125	-0.0286	0.0199	0.1402	0.1229	-0.0509	-0.0193	-0.0511
INTEREST IN GOVERNMENT	5 124	0.2588	0.2823	0.1679	-0.0188	-0.0586	-0.0344	0.1576	0.1702	-0.0610	0.0511	-0.0698
GOVT SHLD END DISCRIM	3 125	0.1539	0.1791	0.1533	-0.0021	0.0044	0.0028	0.0954	0.1155	-0.0200	-0.0521	-0.0641
GOVT SHLD END DISCRIM	4 126	0.1357	0.1397	0.0976	-0.0162	-0.0257	0.0160	0.1275	0.1260	-0.0325	-0.0645	-0.0565
GOVT SHLD END DISCRIM	5 127	0.0603	0.0726	0.1110	-0.0189	-0.0487	-0.0146	0.0494	-0.0138	-0.0070	0.0235	0.0408
SOCIAL DISTANCE (FACE)	3 128	-0.1272	-0.1391	-0.0969	-0.0074	0.0901	0.0028	-0.0733	-0.0913	0.0133	0.0391	0.1040
SOCIAL DISTANCE (FACE)	4 129	-0.1566	-0.1700	-0.0755	0.0443	0.0643	0.0321	-0.1244	-0.1400	-0.0250	0.1142	0.1199
SOCIAL DISTANCE (FACE)	5 130	-0.0960	-0.1159	-0.0320	-0.0252	0.0582	-0.0131	-0.0652	-0.0809	-0.0229	0.0478	0.0379
PERCEIVED DISCRIMINATION	3 131	0.1102	0.1060	0.0310	-0.0286	-0.0301	-0.0005	0.0808	0.1078	0.0118	-0.1170	-0.0780
PERCEIVED DISCRIMINATION	4 132	0.2187	0.2142	0.0767	-0.0371	-0.0651	-0.0048	0.1736	0.1803	-0.0515	-0.0974	-0.0800
PERCEIVED DISCRIMINATION	5 133	0.2016	0.2026	0.0556	-0.0297	-0.1195	-0.0220	0.1978	0.1656	-0.0494	-0.1076	-0.0767
VIETNAM DISSENT	3 134	0.0746	0.0675	0.0313	-0.0219	0.0011	-0.0139	0.0759	0.1244	-0.1255	-0.0776	-0.0539
VIETNAM DISSENT	4 135	0.2113	0.2062	0.0878	-0.0763	-0.0101	-0.0503	0.1817	0.2385	-0.1987	-0.1015	-0.0981
VIETNAM DISSENT	5 136	0.2708	0.2615	0.0999	-0.0272	-0.0008	-0.1034	0.2034	0.2314	-0.1119	-0.1704	-0.1268

*** OUTPUT CORRELATION MATRIX ***

		VAR	1	2	3	4	5	6	7	8	9	10	11
PREF MORE MILITARY INFL	3	137	-0.1779	-0.1904	-0.0767	0.0428	0.0315	0.0673	-0.1485	-0.1936	0.1405	0.0817	0.0800
PREF MORE MILITARY INFL	5	138	-0.3284	-0.3196	-0.1347	0.0351	0.0074	0.1332	-0.2101	-0.2156	0.2586	0.1689	0.1727
ABORTION DISAPPROVAL	4	139	-0.2458	-0.2489	-0.0795	0.0055	-0.0033	0.0767	-0.1426	-0.1401	0.0885	0.0931	0.0925
ABORTION DISAPPROVAL	5	140	-0.1998	-0.2144	-0.0513	0.0421	-0.0149	0.0848	-0.1383	-0.1361	0.0370	0.1336	0.1568
POPULATION CONCERN	4	141	0.2835	0.2881	0.0730	0.0192	-0.0426	-0.0731	0.1124	0.1049	-0.1156	-0.0961	-0.1610
POPULATION CONCERN	5	142	0.2114	0.2340	0.0922	0.0541	-0.0126	-0.0699	0.1324	0.1361	-0.0095	-0.0512	-0.1033
IDEAL NUMBER CHILDREN	4	143	-0.0334	-0.0469	-0.0246	-0.0934	0.0011	-0.0438	-0.0503	-0.0402	0.0474	-0.0520	-0.0568
IDEAL NUMBER CHILDREN	5	144	-0.0656	-0.0570	-0.0070	-0.0954	-0.0377	-0.0187	-0.0764	-0.0642	0.0145	0.0084	0.0277
JOB THAT PAYS OFF	1	145	0.1369	0.1326	0.0769	0.0201	0.0090	0.0263	0.0507	0.0039	-0.0555	-0.0440	-0.0485
JOB THAT PAYS OFF	2	146	0.0679	0.0891	0.0587	-0.0074	0.0556	0.0193	-0.0740	-0.0466	-0.0478	0.0063	0.0044
JOB THAT PAYS OFF	3	147	0.0230	0.0401	0.0358	0.0031	0.0419	0.0320	-0.0754	-0.0588	-0.0123	0.0192	0.0234
JOB THAT PAYS OFF	4	148	-0.0240	-0.0088	0.0619	0.0353	0.0626	0.0967	-0.1663	-0.1462	0.0401	0.0701	0.0450
JOB THAT PAYS OFF	5	149	-0.0028	-0.0723	0.0242	0.0473	0.0554	0.1155	-0.1219	-0.1101	0.0258	0.1093	0.1047
JOB THAT DOESNT BUG ME	1	150	-0.1793	-0.2049	-0.1344	-0.0476	0.0546	-0.0034	-0.1411	-0.0835	-0.0121	0.0309	0.0559
JOB THAT DOESNT BUG ME	2	151	-0.0957	-0.1062	-0.0837	-0.0423	-0.0100	-0.0108	-0.1330	-0.0613	-0.0219	-0.0245	0.0111
JOB THAT DOESNT BUG ME	3	152	-0.0916	-0.1190	-0.1172	-0.0209	0.0358	-0.0021	-0.1219	-0.0324	-0.0399	-0.0408	0.0256
JOB THAT DOESNT BUG ME	4	153	-0.0730	-0.0840	-0.0649	0.0038	0.0249	-0.0555	-0.1434	-0.1009	-0.0697	-0.0162	0.0239
JOB THAT DOESNT BUG ME	5	154	0.0646	0.0685	0.0111	-0.0686	0.0309	-0.1260	-0.0071	0.0250	-0.1015	-0.1331	-0.0893
AMBITIOUS JOB ATTITUDE	1	155	0.2046	0.2652	0.1689	0.0562	-0.0455	0.0195	0.1585	0.0773	-0.0239	-0.0567	-0.0813
AMBITIOUS JOB ATTITUDE	2	156	0.1285	0.1506	0.1116	0.0337	0.0406	0.0208	0.0843	0.0326	-0.0090	0.0268	-0.0074
AMBITIOUS JOB ATTITUDE	3	157	0.0922	0.1217	0.1076	0.0180	-0.0037	0.0243	0.0564	-0.0088	0.0231	0.0476	-0.0031
AMBITIOUS JOB ATTITUDE	4	158	0.0461	0.0659	0.0937	0.0196	0.0181	0.1128	0.0155	-0.0092	0.0875	0.0625	0.0140
AMBITIOUS JOB ATTITUDE	5	159	-0.1211	-0.1092	0.0035	0.0906	0.0097	0.1861	-0.0818	-0.1048	0.1024	0.1889	0.1484
STATUS ASPIRED OCCUPAT	1	160	0.4573	0.4669	0.2560	0.0168	-0.0360	-0.0711	0.2895	0.2625	-0.1351	-0.1543	-0.1768
STATUS ASPIRED OCCUPAT	2	161	0.5217	0.5300	0.2764	0.0420	-0.0140	-0.0893	0.3770	0.2822	-0.1953	-0.1800	-0.2399
STATUS ASPIRED OCCUPAT	3	162	0.5458	0.5633	0.2951	-0.0121	-0.0445	-0.0892	0.3379	0.2897	-0.1894	-0.1695	-0.2395
STATUS ASPIRED OCCUPAT	4	163	0.5764	0.5933	0.3091	-0.0047	-0.0685	-0.0677	0.3174	0.2574	-0.1459	-0.2247	-0.2980

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*** OUTPUT CORRELATION MATRIX ***

	VAR	1	2	3	4	5	6	7	8	9	10	11
STATUS ASPIRED OCCUPAT	5 164	0.5457	0.5602	0.4517	-0.0006	-0.0545	-0.0924	0.3124	0.2957	-0.1571	-0.1654	-0.1943
DELINQ BEHAV IN SCHOOL	1 165	-0.3292	-0.3234	.1432	-0.0466	0.0730	-0.0609	-0.1750	-0.0997	0.1585	0.1195	0.2163
DELINQ BEHAV IN SCHOOL	2 166	-0.3332	-0.3862	-0.1746	-0.0942	0.0459	-0.0493	-0.2133	-0.1286	0.1371	0.0947	0.1950
DELINQ BEHAV IN SCHOOL	3 167	-0.3708	-0.3717	-0.1939	-0.1030	0.0307	-0.0184	-0.1640	-0.1151	0.1434	0.0835	0.1849
SERIOUSNESS OF DELINQ	1 168	-0.1784	-0.1637	-0.1123	-0.0559	0.0443	-0.0593	-0.0739	-0.0677	0.0788	0.0313	0.1159
SERIOUSNESS OF DELINQ	2 169	-0.2000	-0.2027	-0.1250	-0.0919	0.0257	-0.0547	-0.1205	-0.0639	0.0386	0.0388	0.1437
SERIOUSNESS OF DELINQ	3 170	-0.1781	-0.1940	-0.1282	-0.0680	0.0124	-0.0033	-0.1283	-0.0746	0.0500	0.0343	0.1247
SERIOUSNESS OF DELINQ	4 171	-0.1496	-0.1468	-0.1185	-0.0961	0.0407	-0.0608	-0.0368	-0.0719	0.0513	0.0415	0.0982
SERIOUSNESS OF DELINQ	5 172	-0.1061	-0.1226	-0.0904	-0.0944	0.0406	-0.0513	-0.0600	-0.0142	0.0445	-0.0386	0.0088
INTERPERSONAL AGGRESSN	1 173	-0.2591	-0.2510	-0.1278	-0.0464	0.0791	-0.0462	-0.1474	-0.0634	0.1171	0.0966	0.2028
INTERPERSONAL AGGRESSN	2 174	-0.2349	-0.2492	-0.1260	-0.0761	0.0198	-0.0426	-0.1521	-0.0608	0.0567	0.0616	0.1542
INTERPERSONAL AGGRESSN	3 175	-0.2558	-0.2837	-0.1738	-0.0868	0.0446	-0.0054	-0.1565	-0.1106	0.0611	0.0816	0.1906
INTERPERSONAL AGGRESSN	4 176	-0.2378	-0.2476	-0.1427	-0.0783	0.0500	-0.0402	-0.1271	-0.1565	0.1100	0.0889	0.1588
INTERPERSONAL AGGRESSN	5 177	-0.1968	-0.2166	-0.1078	-0.1031	0.0465	-0.0148	-0.0890	-0.0519	0.1191	0.0021	0.0528
THEFT AND VANDALISM	1 178	-0.1376	-0.1220	-0.0980	-0.0687	0.0531	-0.0756	-0.0388	0.0158	0.0499	0.0230	0.0964
THEFT AND VANDALISM	2 179	-0.1621	-0.1604	-0.1166	-0.0878	0.0020	-0.0633	-0.1058	-0.0572	0.0189	0.0170	0.1049
THEFT AND VANDALISM	3 180	-0.1336	-0.1434	-0.1073	-0.0645	-0.0051	-0.0123	-0.0776	-0.0339	0.0379	0.0112	0.0838
THEFT AND VANDALISM	4 181	-0.1005	-0.0985	-0.1065	-0.0938	0.0081	-0.0705	-0.0197	-0.0612	0.0202	0.0094	0.0517
THEFT AND VANDALISM	5 182	-0.0911	-0.0955	-0.0896	-0.0894	0.0299	-0.0557	-0.0280	0.0049	0.0210	-0.0460	0.0019
DAILY CIGARETTE USE=1	3 183	-0.3336	-0.3238	-0.1352	-0.0972	0.0327	0.0097	-0.1072	-0.0775	0.1250	0.0864	0.1549
DAILY CIGARETTE USE=1	4 184	-0.3221	-0.3100	-0.1373	-0.0494	0.0043	-0.0011	-0.1272	-0.0952	0.1593	0.1032	0.1366
DAILY CIGARETTE USE=1	5 185	-0.3218	-0.3107	-0.1572	-0.0984	0.0234	0.0031	-0.1706	-0.1462	0.2314	0.0406	0.1190
ALCOHOL USE 1-6	3 186	-0.2166	-0.2094	-0.0798	-0.0405	0.0449	-0.0175	-0.1162	-0.0930	0.0782	0.0890	0.1216
ALCOHOL USE 1-6	4 187	-0.1506	-0.1202	-0.0605	-0.0105	0.0720	-0.0269	-0.0368	-0.0532	0.0901	0.0752	0.1082
ALCOHOL USE 1-6	5 188	-0.1135	-0.0966	-0.0714	-0.0309	0.0971	-0.0078	0.0211	0.0339	0.0907	-0.0746	0.0212
MARIJUANA USE 1-6	3 189	-0.1747	-0.0887	-0.0189	-0.0493	0.0016	-0.0737	-0.0685	-0.0209	0.0396	-0.0359	0.0335
MARIJUANA USE 1-6	4 190	-0.0001	-0.0017	-0.0373	-0.1016	-0.0493	-0.1346	0.0281	0.0556	0.0553	-0.0771	-0.0328

*** OUTPUT CORRELATION MATRIX ***

	VAR	1	2	3	4	5	6	7	8	9	10	11
MARIJUANA USE 1-6	5 191	-0.0610	-0.0489	-0.1048	-0.1762	0.0172	-0.1584	-0.0577	-0.0012	0.0786	-0.2327	-0.1172
DRUG USE: AMPH, BARB, LSD 3	122	-0.1162	-0.1199	-0.0304	-0.0838	0.0020	-0.0723	-0.0642	-0.0233	0.0199	-0.0017	0.0616
DRUG USE: AMPH, BARB, LSD 4	193	-0.1010	-0.0894	-0.0828	-0.0591	-0.0351	-0.0896	-0.0093	-0.0354	0.0704	-0.0277	0.0196
DRUG USE: AMPH, BARB, LSD 5	194	-0.0999	-0.0851	-0.1224	-0.1566	-0.0152	-0.1532	-0.0557	-0.0092	0.1014	-0.1685	-0.0867
SCHOOL MEAN S.E.L.	1 195	0.2732	0.2711	0.1414	-0.0331	-0.0034	-0.0563	0.1916	0.2231	-0.0513	-0.0900	-0.1666
SCHOOL MEAN QUICK TEST 1	196	0.2643	0.2705	0.1734	-0.0025	0.0189	-0.0165	0.1369	0.2176	-0.0246	-0.0572	-0.1506
SCHOOL MEAN GATH-J	1 197	0.2848	0.2979	0.1994	0.0465	0.0143	0.0164	0.1761	0.2199	-0.0555	-0.0040	-0.1552
SCHOOL MEAN GATES	1 198	0.2616	0.2737	0.1965	0.0293	0.0499	-0.0030	0.1463	0.2425	-0.0306	-0.0344	-0.1293
PARTICIPANT IN 1970-1	4 199	0.2200	0.1991	0.0860	0.0341	-0.0398	0.0121	0.0851	0.0332	-0.1965	-0.0582	-0.0871

G-13

*** OUTPUT CORRELATION MATRIX ***

		VAR	12	13	14	15	16	17	18	19	20	21	22
URBANITY 1-4	5	13	-0.0547										
FAMILY SOCIOECON LEVEL 1	14	0.0031	0.1752										
FATHERS OCCUPATION	1	15	-0.0160	0.1632	0.7136								
FATHERS EDUCATION	1	16	-0.0045	0.1574	0.7776	0.5970							
MOTHERS EDUCATION	1	17	0.0075	0.1446	0.7098	0.3956	0.5472						
POSSESSIONS IN HOME	1	18	0.0329	0.0687	0.6743	0.3129	0.3512	0.3557					
NUMBER BOOKS IN HOME	1	19	-0.0276	0.1035	0.6596	0.3622	0.3553	0.3583	0.4394				
ROOMS/PERSON IN HOME	1	20	0.0194	0.0459	0.5353	0.2371	0.2644	0.2773	0.2441	0.2147			
NUMBER OF SIBLINGS	1	21	-0.0259	-0.0946	-0.3207	-0.1638	-0.1648	-0.2013	-0.2039	-0.1200	-0.4394		
LIVES W BOTH PARENTS=1	1	22	0.0172	-0.0128	0.0877	0.0643	0.0320	0.0178	0.1819	0.1023	-0.0426	-0.0691	
PARENTAL PUNITIVENESS	1	23	-0.0542	0.0467	-0.0969	-0.0387	-0.0829	-0.0504	-0.0468	-0.0518	-0.1151	0.0470	-0.0340
BLACK:SGG SCHL,SOUTH=1	1	24	-0.0866	-0.0638	-0.2386	-0.1686	-0.1230	-0.1113	-0.3108	-0.1049	-0.1396	0.2130	-0.1268
BLACK:SGG SCHL,NORTH=1	1	25	-0.0387	0.0472	-0.0475	-0.0779	-0.0354	-0.0169	-0.0435	0.0025	-0.0613	0.0988	-0.0768
BLACK:INTEGRATED SCH=1	1	26	-0.0365	0.0666	-0.0401	-0.0922	-0.0141	0.0175	-0.0434	-0.0373	-0.0129	0.1139	-0.0117
REGION:WLS=1	1	27	-0.0359	-0.0144	0.0550	0.0197	0.0638	0.0722	0.0745	0.0389	-0.0314	0.0784	-0.0699
REGION:NORTHCENTRAL=1	1	28	-0.0036	-0.0085	0.0257	-0.0038	-0.0083	-0.0179	0.1611	-0.0099	0.0403	0.0199	0.0720
REGION:NORTHEAST=1	1	29	-0.0357	0.0849	0.0864	0.0643	0.0583	0.0221	0.0367	0.0874	0.0240	-0.1225	0.0355
REGION:SOUTH=1	1	30	0.0661	-0.0578	-0.1503	-0.0721	-0.0982	-0.0612	-0.1985	-0.1013	-0.0372	0.0278	-0.0489
RAISED ON FARM=0,NOT=1	1	31	0.0435	-0.2057	-0.1853	-0.2433	-0.1802	-0.1106	-0.1621	-0.1124	-0.0086	0.1081	0.0014
ABILITY COMPOSITE	1	32	0.0596	0.1405	0.4806	0.3467	0.3667	0.3204	0.3518	0.3034	0.2917	-0.3333	0.1194
QUICK TEST	1	33	0.0602	0.1136	0.4416	0.3019	0.3308	0.2975	0.3325	0.2842	0.2828	-0.3177	0.1116
GATES-J VOCABULARY TEST	1	34	0.0300	0.1264	0.4322	0.3227	0.3314	0.2944	0.2810	0.2724	0.2552	-0.2969	0.0969
GATES READING TEST	1	35	0.0647	0.1261	0.3960	0.2832	0.2943	0.2489	0.3171	0.2416	0.2218	-0.2634	0.1017
REPEATED GRADE=0,NOT=1	1	36	0.0108	0.0605	0.2662	0.1411	0.2147	0.2156	0.1962	0.1491	0.1402	-0.1755	0.1166
AVERAGE GRADE:9TH YR	1	37	0.0479	0.0948	0.2506	0.1581	0.1857	0.1926	0.1631	0.1455	0.1909	-0.2091	0.0923
AVERAGE GRADE:10TH YR	2	38	0.0807	0.1131	0.2382	0.1619	0.2015	0.1763	0.1598	0.1456	0.1535	-0.1716	0.0416
AVERAGE GRADE:12TH YR	3	39	0.0425	0.0939	0.2525	0.1507	0.1882	0.1719	0.1927	0.2029	0.1289	-0.1667	0.0520

*** OUTPUT CORRELATION MATRIX ***

		VAR	12	13	14	15	16	17	18	19	20	21	22
# OF HOURS HOMEWORK	1	40	0.0295	0.0006	0.0769	0.0391	0.0357	0.0893	0.0474	0.0500	0.0782	-0.0339	0.0403
# CP HOURS HOMEWORK	2	41	0.0026	0.0223	0.0875	0.0165	0.0866	0.0827	0.0429	0.0991	0.0475	-0.0087	0.0278
# OF HOURS HOMEWORK	3	42	-0.0213	0.0736	0.1133	0.0977	0.1053	0.0798	0.0426	0.1034	0.0359	-0.0461	0.0302
FEEL BEHAV IN SCHOOL	1	43	-0.0407	-0.0608	-0.1273	-0.0505	-0.0989	-0.1196	-0.1025	-0.0753	-0.0651	0.0871	-0.0535
FEEL BEHAV IN SCHOOL	2	44	-0.0350	-0.0870	-0.0864	-0.0509	-0.0883	-0.0849	-0.0515	-0.0752	-0.0226	0.0739	-0.0545
CURRICULUM:COLL PREP=1	1	45	0.0234	0.1602	0.3675	0.2796	0.2896	0.2395	0.2391	0.2063	0.2105	-0.2152	0.0477
CURRICULUM:COLL PREP=1	2	46	0.0016	0.1551	0.4279	0.3228	0.3433	0.2959	0.2433	0.2635	0.2415	-0.2560	0.0699
CURRICULUM:COLL PREP=1	3	47	-0.0154	0.1483	0.3895	0.2731	0.3161	0.2804	0.2309	0.2547	0.1760	-0.2234	0.0376
COLLEGE PLANS? YES=1	1	48	-0.0039	0.1173	0.3218	0.2229	0.2696	0.2466	0.2134	0.2046	0.1592	-0.1546	0.0366
COLLEGE PLANS? YES=1	2	49	0.0525	0.1511	0.3073	0.2061	0.2556	0.2236	0.1985	0.1906	0.1667	-0.1991	0.0558
COLLEGE PLANS? YES=1	3	50	0.0428	0.1463	0.3681	0.2406	0.3276	0.2835	0.2233	0.2097	0.1886	-0.2123	0.0591
INTEREST IN COURSES	1	51	-0.0373	0.0056	-0.0153	0.0290	-0.0195	-0.0313	-0.0054	-0.0292	-0.0072	0.0128	0.0341
INTEREST IN COURSES	2	52	-0.0132	-0.0237	0.0543	0.0722	0.0521	0.0253	0.0144	0.0247	0.0349	0.0140	-0.0160
INTEREST IN COURSES	3	53	-0.0484	0.0386	0.0630	0.0436	0.0328	0.0583	0.0299	0.0513	0.0478	-0.0388	-0.0361
POSITIVE SCH ATTITUDES	1	54	0.0592	-0.0105	0.0990	0.0368	0.1124	0.0714	0.0767	0.0475	0.0594	-0.0737	0.0435
POSITIVE SCH ATTITUDES	2	55	0.0734	0.0100	0.0566	0.0289	0.0536	0.0343	0.0548	0.0463	0.0279	-0.0493	0.0325
POSITIVE SCH ATTITUDES	3	56	0.0451	0.0045	-0.0009	-0.0328	0.0169	-0.0082	0.0163	0.0012	-0.0070	0.0099	-0.0049
NEGATIVE SCH ATTITUDES	1	57	-0.0663	-0.0445	-0.1986	-0.1186	-0.1761	-0.1344	-0.1466	-0.1315	-0.1072	0.1126	-0.0555
NEGATIVE SCH ATTITUDES	2	58	-0.0672	-0.0494	-0.1498	-0.0633	-0.1322	-0.1146	-0.1041	-0.1197	-0.0701	0.0578	-0.0541
NEGATIVE SCH ATTITUDES	3	59	-0.0272	-0.1015	-0.1021	-0.0726	-0.1336	-0.0830	-0.0389	-0.0644	-0.0150	0.0548	-0.0172
ACADEMIC ACHVMT VALUE	1	60	0.0206	0.0342	0.1260	0.0720	0.0990	0.1077	0.0933	0.1081	0.0822	-0.0746	0.0368
ACADEMIC ACHVMT VALUE	2	61	0.0227	0.0325	-0.0259	-0.0381	-0.0397	-0.0321	0.0300	0.0188	-0.0090	0.0043	-0.0166
ACADEMIC ACHVMT VALUE	3	62	0.0017	0.0085	-0.1124	-0.1005	-0.0759	-0.0929	-0.0707	-0.0581	-0.0467	0.0393	-0.0594
SELF-CONCEPT SCHL ABIL	1	63	0.0062	0.1150	0.3463	0.2198	0.2962	0.2555	0.2122	0.2471	0.2013	-0.2163	0.0730
SELF-CONCEPT SCHL ABIL	2	64	0.0473	0.1289	0.3237	0.2307	0.2879	0.2253	0.1636	0.2451	0.1817	-0.2074	0.0337
DOES BEST WORK IN SCHL	1	65	-0.0027	0.0512	0.0358	0.0015	-0.0104	0.0235	0.0148	0.0001	-0.0101	-0.0094	-0.0062
DOES BEST WORK IN SCHL	2	66	0.0146	0.0444	-0.0413	-0.0305	0.0264	-0.0166	-0.0444	-0.0348	-0.0345	0.0152	0.0420

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*** OUTPUT CORRELATION MATRIX ***

	VAR	12	13	14	15	16	17	18	19	20	21	22	
WORKS HARDER THAN AVG	1	67	0.0190	0.0776	0.1424	0.0781	0.1317	0.1135	0.1105	0.0593	0.0675	-0.0878	0.0304
WORKS HARDER THAN AVG	2	68	0.0388	0.0426	0.0818	0.0664	0.1129	0.0585	0.0586	0.0352	0.0388	-0.0664	0.0546
SATIS W OWN SCHL WORK	1	69	0.0376	0.0422	0.0722	0.0465	0.0589	0.0459	0.0722	0.0414	0.0517	-0.0668	0.0281
SATIS W OWN SCHL WORK	2	70	0.0427	0.0399	0.0629	0.0634	0.0351	0.0380	0.0167	-0.0178	-0.0207	-0.0343	0.0275
SELF-ESTEEM	1	71	0.0512	0.0753	0.1605	0.0838	0.1362	0.1419	0.1196	0.0927	0.0975	-0.0720	0.0781
SELF-ESTEEM	2	72	0.0614	0.0714	0.1076	0.0434	0.1055	0.0667	0.1067	0.0701	0.0698	-0.0897	0.0404
SELF-ESTEEM	3	73	0.0689	0.0733	0.1213	0.0573	0.1113	0.0648	0.1136	0.0791	0.0412	-0.0567	0.0328
SELF-ESTEEM	4	74	0.0599	0.0466	0.1182	0.0712	0.1057	0.0659	0.1183	0.0743	0.0629	-0.0488	-0.0338
SELF-ESTEEM	5	75	0.0483	0.0232	0.0671	0.0427	0.0707	0.0262	0.0878	0.0445	0.0506	-0.0038	0.0217
NEED SOCIAL APPROVAL	1	76	0.0595	0.0080	-0.0861	-0.1179	-0.0587	-0.0566	-0.0419	-0.0276	-0.0454	0.0532	-0.0081
TEST ANXIETY	1	77	-0.0129	-0.0459	-0.1276	-0.0392	-0.1054	-0.1014	-0.0876	-0.0913	-0.0761	0.0457	-0.0502
TEST ANXIETY	2	78	-0.0125	-0.0582	-0.0994	-0.0325	-0.1061	-0.0930	-0.0350	-0.0583	-0.0668	0.0258	-0.0138
NEED SELF-DEVELOPMENT	1	79	0.0515	0.0339	0.1261	0.0791	0.1107	0.1090	0.0992	0.0816	0.0789	-0.0761	0.0521
NEED SELF-DEVELOPMENT	2	80	0.0690	0.0253	0.1379	0.0801	0.1067	0.0876	0.1136	0.1184	0.1022	-0.1053	0.0090
NEED SELF-DEVELOPMENT	3	81	0.0327	0.0679	0.1020	0.0718	0.0888	0.0659	0.0818	0.0619	0.0708	-0.0968	-0.0011
NEED SELF-DEVELOPMENT	4	82	0.0786	0.0038	0.0699	0.0411	0.0594	0.0182	0.1034	0.0191	0.0763	-0.0626	-0.0100
NEED SELF-UTILIZATION	1	83	0.0435	0.0401	0.1177	0.1077	0.1093	0.0687	0.0989	0.0583	0.0718	-0.0726	0.0520
NEED SELF-UTILIZATION	2	84	0.0221	0.0554	0.0997	0.0734	0.0868	0.0436	0.1035	0.0946	0.0465	-0.0713	0.0145
NEED SELF-UTILIZATION	3	85	0.0288	0.0497	0.0777	0.0580	0.0583	0.0398	0.0649	0.0710	0.0458	-0.0624	-0.0002
NEED SELF-UTILIZATION	4	86	0.0531	0.0615	0.0444	0.0175	0.0142	-0.0045	0.0794	0.0340	0.0604	-0.0635	-0.0141
HAPPINESS	1	87	0.0675	-0.0299	0.0306	-0.0002	0.0463	0.0171	0.0386	0.0072	0.0209	0.0001	0.0283
HAPPINESS	2	88	0.0716	-0.0245	0.0125	-0.0173	0.0293	-0.0010	0.0361	-0.0184	0.0239	-0.0343	0.0246
HAPPINESS	3	89	0.0406	-0.0177	0.0033	-0.0375	0.0070	-0.0180	0.0359	-0.0082	-0.0009	-0.0096	0.0312
HAPPINESS	4	90	0.1067	-0.0234	0.0168	-0.0054	0.0404	-0.0020	0.0222	-0.0147	0.0374	-0.0308	-0.0204
NEGATIVE AFFECT STATES	1	91	-0.0587	-0.0041	-0.0879	-0.0128	-0.0792	-0.0899	-0.0659	-0.0438	-0.0500	0.0661	-0.0433
NEGATIVE AFFECT STATES	2	92	-0.0670	-0.0240	-0.0410	0.0218	-0.0556	-0.0227	-0.0252	-0.0286	-0.0587	0.0352	-0.0259
NEGATIVE AFFECT STATES	3	93	-0.0635	-0.0239	-0.0919	-0.0202	-0.0966	-0.0442	-0.0779	-0.0480	-0.0574	0.0375	-0.0278

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*** OUTPUT CORRELATION MATRIX ***

	VAR	12	13	14	15	16	17	18	19	20	21	22
NEGATIVE AFFECT STATES	4 94	-0.0867	-0.0149	-0.0891	-0.0469	-0.0988	-0.0573	-0.0549	-0.0541	-0.0607	0.0427	0.0105
SOMATIC SYMPTOMS	1 95	-0.0475	-0.0823	-0.1328	-0.0619	-0.1272	-0.0864	-0.1176	-0.0543	-0.0657	0.0984	-0.0234
SOMATIC SYMPTOMS	2 96	-0.0892	-0.0890	-0.1110	-0.0574	-0.1116	-0.0811	-0.0832	-0.0287	-0.0697	0.1008	-0.0269
SOMATIC SYMPTOMS	3 97	-0.0380	-0.0631	-0.1216	-0.0456	-0.1016	-0.0981	-0.1238	-0.0732	-0.0611	0.0781	-0.0443
SOMATIC SYMPTOMS	4 98	-0.0593	-0.0602	-0.1091	-0.0379	-0.0804	-0.0784	-0.1151	-0.0587	-0.0808	0.1149	-0.0231
IMPULSE TO AGGRESSION	1 99	-0.0328	-0.0322	0.0023	0.0439	-0.0406	-0.0486	0.0177	0.0146	0.0171	-0.0276	0.0221
IMPULSE TO AGGRESSION	2 100	-0.0418	-0.0045	0.0363	0.0721	-0.0191	0.0141	0.0297	0.0328	0.0120	-0.0722	0.0257
IMPULSE TO AGGRESSION	3 101	-0.0296	-0.0342	0.0745	0.1015	0.0371	0.0484	0.0665	0.0360	0.0534	-0.1105	-0.0054
IMPULSE TO AGGRESSION	4 102	-0.0684	0.0268	0.0669	0.0724	0.0207	0.0608	0.0291	0.0413	0.0125	-0.0617	0.0388
SOCIAL VALUES CLUSTER	1 103	0.0573	-0.0183	0.1014	0.0489	0.0784	0.0810	0.0860	0.0627	0.0698	-0.0721	0.0449
SOCIAL VALUES CLUSTER	2 104	0.0811	-0.0244	0.0181	-0.0205	-0.0128	0.0070	0.0589	0.0575	0.0242	-0.0544	-0.0271
SOCIAL VALUES CLUSTER	3 105	0.0333	-0.0092	-0.0485	-0.0864	-0.0516	-0.0491	-0.0045	-0.0117	0.0056	-0.0536	-0.0624
SOCIAL VALUES CLUSTER	4 106	0.0535	-0.0543	-0.0501	-0.0819	-0.0630	-0.0772	0.0128	-0.0013	0.0252	0.0008	-0.0744
INTERNAL CONTROL	1 107	0.0239	0.0469	0.1708	0.1059	0.1460	0.0956	0.1186	0.1522	0.0695	-0.1138	0.0662
INTERNAL CONTROL	2 108	0.0541	-0.0007	0.1040	0.0727	0.0651	0.0572	0.0791	0.0867	0.0822	-0.0598	-0.0063
INTERNAL CONTROL	3 109	0.0560	-0.0090	0.0811	0.0716	0.0471	0.0491	0.0559	0.0583	0.0666	-0.0505	-0.0160
INTERNAL CONTROL	4 110	0.0782	-0.0249	0.0506	0.0479	0.0407	0.0125	0.0513	0.0546	0.0254	-0.0414	-0.0213
TRUST IN PEOPLE	1 111	0.0454	-0.0741	0.0414	0.0350	0.0520	0.0304	0.0723	0.0235	-0.0065	-0.0109	0.0183
TRUST IN PEOPLE	2 112	0.0179	-0.0900	-0.0062	0.0235	0.0143	0.0032	-0.0055	-0.0043	-0.0369	0.0080	0.0232
TRUST IN PEOPLE	3 113	0.0609	-0.0729	0.0832	0.0836	0.0710	0.0602	0.0842	0.0239	0.0202	-0.0590	0.0237
TRUST IN PEOPLE	4 114	0.0442	-0.0417	0.0780	0.0681	0.0674	0.0072	0.0809	0.0662	0.0198	-0.0163	0.0002
TRUST IN GOVERNMENT	1 115	-0.0047	0.0230	0.0314	0.0099	0.0758	-0.0039	0.0314	0.0071	-0.0055	-0.0153	0.0135
TRUST IN GOVERNMENT	2 116	0.0284	-0.0190	-0.0195	-0.0342	0.0016	-0.0091	0.0049	-0.0352	-0.0026	-0.0046	-0.0082
TRUST IN GOVERNMENT	3 117	0.0197	-0.0222	-0.0263	-0.0187	-0.0116	-0.0116	0.0051	-0.0536	-0.0219	0.0132	0.0077
TRUST IN GOVERNMENT	4 118	0.0264	-0.0100	-0.1116	-0.0792	-0.1008	-0.0860	-0.0276	-0.0917	-0.0377	0.0272	0.0087
TRUST IN GOVERNMENT	5 119	0.0258	-0.0803	-0.1255	-0.0669	-0.1234	-0.0787	-0.0633	-0.1242	-0.0423	0.0614	-0.0525
INTEREST IN GOVERNMENT	1 120	-0.0411	0.0471	0.1028	-0.0580	0.0794	0.0849	0.0646	0.0864	0.0455	-0.0084	0.0049

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*** OUTPUT CORRELATION MATRIX ***

		VAR	12	13	14	15	16	17	18	19	20	21	22
INTEREST IN GOVERNMENT 2	121	1.0015	0.0642	0.1372	0.0795	0.1210	0.1033	0.0896	0.1132	0.0672	-0.0927	-0.0203	
INTEREST IN GOVERNMENT 3	122	0.0265	1.0437	0.1456	0.0849	0.1334	0.1214	0.0907	0.1348	0.0354	-0.0347	0.0129	
INTEREST IN GOVERNMENT 4	123	0.0135	0.0960	0.1559	0.0697	0.1168	0.1014	0.1113	0.1469	0.0804	-0.0412	-0.0441	
INTEREST IN GOVERNMENT 5	124	0.0327	0.0663	0.1902	0.1305	0.1580	0.1629	0.1035	0.1319	0.0992	-0.0583	0.0030	
GOVT SHLD END DISCRIM 3	125	-0.0015	0.0947	0.1331	0.0369	0.1168	0.1151	0.0640	0.1521	0.0572	-0.0193	-0.0387	
GOVT SHLD END DISCRIM 4	126	-0.0255	0.0609	0.1326	0.0474	0.1161	0.0802	0.0698	0.1265	0.0875	-0.0564	-0.0158	
GOVT SHLD END DISCRIM 5	127	-0.0081	0.0271	-0.0008	-0.0134	-0.0060	-0.0221	-0.0251	0.0490	-0.0052	0.0046	-0.0233	
SOCIAL DISTANCE (RACE) 3	128	0.0249	-0.0906	-0.1332	-0.0675	-0.1158	-0.0986	-0.0495	-0.1547	-0.0439	0.0141	0.0262	
SOCIAL DISTANCE (RACE) 4	129	0.0283	-0.0923	-0.1728	-0.1198	-0.1561	-0.1098	-0.1028	-0.1628	-0.0304	0.0124	0.0377	
SOCIAL DISTANCE (RACE) 5	130	0.0121	-0.0839	-0.0779	-0.0408	-0.0589	-0.0688	-0.0689	-0.1187	-0.0026	-0.0179	0.0490	
PERCEIVED DISCRIMINATN 3	131	-0.0602	0.0696	0.1476	0.1224	0.1551	0.1004	0.0600	0.1170	0.0525	-0.0054	-0.0252	
PERCEIVED DISCRIMINATN 4	132	-0.0417	0.1219	0.1802	0.1486	0.1672	0.1522	0.0516	0.1252	0.0986	-0.0650	-0.0455	
PERCEIVED DISCRIMINATN 5	133	-0.0476	0.1234	0.2078	0.1305	0.1812	0.1694	0.0713	0.1688	0.0990	-0.0134	-0.0069	
VIETNAM DISSENT 3	134	-0.0344	0.1204	0.0831	0.0798	0.0862	0.0455	-0.0066	0.0857	0.0576	-0.0586	0.0177	
VIETNAM DISSENT 4	135	-0.0207	0.1409	0.2296	0.1631	0.2222	0.1668	0.0853	0.1915	0.1072	-0.0890	-0.0222	
VIETNAM DISSENT 5	136	-0.0678	0.1763	0.2302	0.1562	0.1861	0.1689	0.1049	0.1765	0.1087	-0.1182	0.0430	
PREP MORE MILITARY INFL 3	137	0.0189	-0.1094	-0.1725	-0.1472	-0.1809	-0.1099	-0.0362	-0.1359	-0.0656	0.0805	-0.0201	
PREP MORE MILITARY INFL 5	138	0.0316	-0.1157	-0.2806	-0.1927	-0.2342	-0.2153	-0.1434	-0.2212	-0.1200	0.1351	-0.0326	
ABORTION DISAPPROVAL 4	139	0.0301	-0.1227	-0.2332	-0.1832	-0.1736	-0.2173	-0.1143	-0.1411	-0.1337	0.1433	-0.0272	
ABORTION DISAPPROVAL 5	140	-0.0672	-0.1295	-0.2029	-0.1736	-0.1283	-0.1420	-0.1354	-0.1054	-0.1296	0.1884	-0.0092	
POPULATION CONCERN 4	141	0.0234	0.0150	0.2329	0.1737	0.1938	0.1703	0.1579	0.1357	0.1561	-0.2401	0.0439	
POPULATION CONCERN 5	142	0.0330	0.0331	0.1759	0.1079	0.1236	0.1081	0.1419	0.1151	0.1533	-0.2132	0.0452	
IDEAL NUMBER CHILDREN 4	143	-0.0124	0.0343	-0.0678	-0.0635	-0.0569	-0.0540	-0.0461	-0.0231	-0.0618	0.1579	0.0314	
IDEAL NUMBER CHILDREN 5	144	-0.0212	-0.0042	-0.0740	-0.0308	-0.0324	-0.0502	-0.0536	-0.0622	-0.1002	0.1828	0.0165	
JOB THAT PAYS OFF 1	145	-0.0034	0.0121	0.0535	0.0437	0.0335	0.0073	0.0742	0.0175	0.0417	-0.0944	0.0691	
JOB THAT PAYS OFF 2	146	0.0078	-0.0001	-0.0224	-0.0171	-0.0359	-0.0296	0.0148	-0.0346	0.0589	-0.0753	-0.0192	
JOB THAT PAYS OFF 3	147	-0.0043	0.0199	-0.0437	-0.0346	-0.0570	-0.0497	-0.0050	-0.0366	0.0055	-0.0438	0.0012	

*** OUTPUT CORRELATION MATRIX ***

	VAR	12	13	14	15	16	17	18	19	20	21	22	
JOB THAT PAYS OFF	4	148	0.0464	-0.0164	-0.0508	-0.0469	-0.0657	-0.0974	0.0368	-0.0599	0.0093	-0.0058	-0.0074
JOB THAT PAYS OFF	5	149	0.0281	-0.0049	-0.1406	-0.0915	-0.0962	-0.1122	-0.0865	-0.1289	-0.0174	0.0302	-0.0151
JOB THAT DOESNT BUG ME 1	150	-0.0230	-0.0283	-0.1865	-0.1096	-0.1536	-0.1211	-0.1158	-0.1710	-0.0906	0.0662	-0.0073	
JOB THAT DOESNT BUG ME 2	151	-0.0306	0.0352	-0.1723	-0.0491	-0.1114	-0.1153	-0.1498	-0.1779	-0.0532	0.0017	-0.0191	
JOB THAT DOESNT BUG ME 3	152	-0.0700	-0.0145	-0.1577	-0.0913	-0.1086	-0.0995	-0.1258	-0.1370	-0.0540	0.0595	-0.0103	
JOB THAT DOESNT BUG ME 4	153	-0.0397	0.0124	-0.1234	-0.0563	-0.0799	-0.0735	-0.0966	-0.1296	-0.0425	0.0369	0.0191	
JOB THAT DOESNT BUG ME 5	154	-0.0768	0.0505	-0.0176	-0.0131	-0.0108	0.0266	-0.0202	-0.0335	0.0060	-0.0020	0.0435	
AMBITIOUS JOB ATTITUDE 1	155	0.0174	0.0330	0.1925	0.1241	0.1583	0.1138	0.1476	0.1650	0.1061	-0.1178	0.0469	
AMBITIOUS JOB ATTITUDE 2	156	0.0331	-0.0333	0.1348	0.0337	0.0796	0.0868	0.1452	0.1416	0.0864	-0.0471	0.0064	
AMBITIOUS JOB ATTITUDE 3	157	0.0501	0.0241	0.0929	0.0537	0.0555	0.0496	0.0979	0.0882	0.0452	-0.0720	0.0095	
AMBITIOUS JOB ATTITUDE 4	158	0.0629	-0.0203	0.0689	0.0198	0.0301	0.0005	0.1067	0.0736	0.0469	-0.0395	-0.0207	
AMBITIOUS JOB ATTITUDE 5	159	0.0851	-0.0463	-0.0931	-0.0528	-0.0584	-0.1006	-0.0439	-0.0596	-0.0177	0.0230	-0.0448	
STATUS ASPIRED OCCUPAT 1	160	-0.0191	0.1975	0.3660	0.3029	0.2857	0.2934	0.1992	0.2076	0.1839	-0.2326	0.0077	
STATUS ASPIRED OCCUPAT 2	161	-0.0015	0.1797	0.3381	0.2623	0.2849	0.2623	0.1873	0.1872	0.1904	-0.2366	0.0312	
STATUS ASPIRED OCCUPAT 3	162	0.0051	0.2033	0.3559	0.2852	0.2997	0.2510	0.2124	0.2154	0.1766	-0.2427	0.0580	
STATUS ASPIRED OCCUPAT 4	163	-0.0046	0.2177	0.3843	0.3075	0.3198	0.2702	0.2518	0.2322	0.1695	-0.1936	0.0755	
STATUS ASPIRED OCCUPAT 5	164	-0.0187	0.2175	0.3379	0.2272	0.2913	0.2904	0.2065	0.1974	0.1886	-0.2085	0.0249	
DELINQ BEHAV IN SCHOOL 1	165	-0.0480	-0.0103	-0.1531	-0.0914	-0.1401	-0.1719	-0.0887	-0.0633	-0.0794	0.0896	-0.0522	
DELINQ BEHAV IN SCHOOL 2	166	-0.0496	-0.0289	-0.1715	-0.0936	-0.1460	-0.1548	-0.1237	-0.0839	-0.0637	0.1311	-0.1004	
DELINQ BEHAV IN SCHOOL 3	167	-0.0473	-0.0359	-0.1677	-0.0979	-0.1490	-0.1512	-0.1111	-0.0902	-0.0844	0.1431	-0.1043	
SERIOUSNESS OF DELINQ 1	168	-0.0560	0.0110	-0.0130	0.0252	-0.0108	-0.0570	0.0111	0.0297	-0.0097	0.0294	-0.0321	
SERIOUSNESS OF DELINQ 2	169	-0.0707	0.0029	-0.0808	-0.0042	-0.0833	-0.0686	-0.0638	-0.0285	-0.0421	0.0908	-0.0346	
SERIOUSNESS OF DELINQ 3	170	-0.0577	-0.0023	-0.0593	-0.0046	-0.0733	-0.0671	-0.0743	-0.0333	-0.0310	0.0957	-0.0748	
SERIOUSNESS OF DELINQ 4	171	-0.0232	-0.0080	-0.0362	-0.0102	-0.0152	-0.0097	-0.0149	-0.0438	-0.0273	0.0674	-0.0296	
SERIOUSNESS OF DELINQ 5	172	-0.0337	0.0361	-0.0162	-0.0149	-0.0686	-0.0272	0.0396	0.0123	-0.0246	0.0186	-0.0132	
INTERPERSONAL AGGRESSN 1	173	-0.0606	-0.0247	-0.0710	-0.0279	-0.0752	-0.1126	-0.0206	-0.0111	-0.0203	0.0351	-0.0189	
INTERPERSONAL AGGRESSN 2	174	-0.0537	-0.0319	-0.1299	-0.0377	-0.0954	-0.0923	-0.1060	-0.0792	-0.0593	0.1283	-0.0276	

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*** OUTPUT CORRELATION MATRIX ***

	VAR	12	13	14	15	16	17	18	19	20	21	22
INTERPERSONAL AGGRESSION 3	175	-0.0614	-0.0465	-0.1568	-0.0648	-0.1277	-0.1185	-0.1346	-0.0864	-0.0935	0.1669	-0.0681
INTERPERSONAL AGGRESSION 4	176	-0.0216	-0.1240	-0.1352	-0.0640	-0.0732	-0.0904	-0.1025	-0.1084	-0.0979	0.1364	-0.0403
INTERPERSONAL AGGRESSION 5	177	-0.1221	-0.0156	-0.0868	-0.0415	-0.0813	-0.0775	-0.0251	-0.0322	-0.0763	0.0579	-0.0302
THEFT AND VANDALISM 1	178	-0.0483	0.0139	0.0186	0.0452	0.0081	-0.0478	0.0422	0.0541	0.0087	0.0007	-0.0156
THEFT AND VANDALISM 2	179	-0.0614	0.0128	-0.0324	0.0218	-0.0526	-0.0278	-0.0281	-0.0020	-0.0116	0.0539	-0.0500
THEFT AND VANDALISM 3	180	-0.0465	-0.0662	-0.0224	0.0278	-0.0423	-0.0334	-0.0207	-0.0197	-0.0078	0.0457	-0.0631
THEFT AND VANDALISM 4	181	-0.0197	0.0008	0.0154	0.0076	0.0161	0.0246	0.0371	-0.0062	0.0085	0.0248	-0.0177
THEFT AND VANDALISM 5	182	-0.0380	0.0260	-0.0021	-0.0020	-0.0628	-0.0144	0.0522	0.0238	-0.0218	0.0111	0.0073
DAILY CIGARETTE USE=1	3 183	-0.0199	-0.0585	-0.1232	-0.0916	-0.1026	-0.1026	-0.0694	-0.0577	-0.0512	0.0519	-0.0778
DAILY CIGARETTE USE=1	4 184	0.0139	-0.0507	-0.0960	-0.0870	-0.0897	-0.0678	-0.0345	-0.0578	-0.0466	0.0491	-0.0284
DAILY CIGARETTE USE=1	5 185	-0.0432	-0.0464	-0.1141	-0.0866	-0.0959	-0.0881	-0.0791	-0.0548	-0.0762	0.1005	-0.0608
ALCOHOL USE 1-6	3 186	0.0055	-0.0844	-0.0676	-0.0614	-0.0553	-0.0680	-0.0161	-0.0540	0.0020	-0.0249	-0.0933
ALCOHOL USE 1-6	4 187	-0.0044	-0.0377	0.0158	0.0048	0.0067	-0.0179	0.0664	-0.0258	0.0346	-0.0497	-0.0278
ALCOHOL USE 1-6	5 188	-0.0967	0.0156	0.0312	0.0435	-0.0030	-0.0341	0.0462	0.0039	0.0384	0.0002	-0.0429
MARIJUANA USE 1-6	3 189	-0.0659	0.0837	0.0513	0.0508	0.0830	0.0524	-0.0034	0.0631	0.0163	-0.0249	-0.0647
MARIJUANA USE 1-6	4 190	-0.0501	0.1331	0.1682	0.1252	0.1730	0.1470	0.0668	0.1244	0.0589	-0.0558	-0.0697
MARIJUANA USE 1-6	5 191	-0.1400	0.1091	0.0926	0.0749	0.0672	0.0590	0.0596	0.0806	0.0252	0.0049	-0.0106
DRUG USE: AMPH, BARB, LSD	3 192	-0.0445	0.0729	0.0090	0.0291	0.0933	0.0432	-0.0334	0.0041	-0.0456	0.0197	-0.0447
DRUG USE: AMPH, BARB, LSD	4 193	-0.0417	0.0824	0.0498	0.0315	0.0769	0.0506	-0.0066	0.0281	0.0158	-0.0082	-0.0477
DRUG USE: AMPH, BARB, LSD	5 194	-0.0865	0.0454	0.0503	0.0555	0.0173	0.0255	0.0521	0.0445	-0.0038	0.0092	-0.0496
SCHOOL MEAN S.E.L.	1 195	0.0505	0.1645	0.5182	0.4235	0.4141	0.3745	0.3920	0.2874	0.2476	-0.2220	0.0839
SCHOOL MEAN QUICK TEST	1 196	0.0749	0.0696	0.3859	0.3040	0.2545	0.2494	0.3326	0.2052	0.2148	-0.2653	0.1124
SCHOOL MEAN BATES-J	1 197	0.0714	0.1084	0.3661	0.2999	0.2614	0.2183	0.3138	0.1891	0.1995	-0.2970	0.1449
SCHOOL MEAN BATES	1 198	0.0404	0.0995	0.3464	0.2885	0.2329	0.2112	0.3496	0.1639	0.2090	-0.2818	0.1408
PARTICIPANT IN 1970-1	4 199	0.0274	-0.0175	0.0544	0.0202	0.0639	0.0412	0.0216	0.0024	0.0531	-0.0622	0.0674

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*** OUTPUT CORRELATION MATRIX ***

	VAR	23	24	25	26	27	28	29	30	31	32	33	
BLACK:SEG SCHL,SOUTH=1	1	24	1.0586										
BLACK:SEG SCHL,NORTH=1	1	25	0.0214	-0.0320									
BLACK:INTEGRATED SCH=1	1	26	-0.0222	-0.0315	-0.0227								
REGION:WEST=1	1	27	0.0477	-0.0919	-0.0562	-0.0070							
REGION:NORTHCENTRAL=1	1	28	0.0030	-0.1449	0.1754	-0.0480	-0.3053						
REGION:NORTHEAST=1	1	29	0.0275	-0.1141	-0.0319	0.0720	-0.2422	-0.3670					
REGION:SOUTH=1	1	30	-0.0674	0.3282	-0.0974	-0.0114	-0.2872	-0.4353	-0.3452				
PAISED ON PAID=0,NOT=1	1	31	-0.0485	0.0414	-0.0516	-0.0225	0.0026	0.0869	-0.1692	0.0653			
ABILITY COMPOSITE	1	32	-0.1835	-0.3940	-0.1459	-0.0928	-0.0454	0.0466	0.1494	-0.1479	-0.1013		
QUICK TEST	1	33	-0.1165	-0.3757	-0.0957	-0.0577	-0.0302	0.0339	0.1711	-0.1674	-0.1196	0.8731	
GATE-J VOCABULARY TEST	1	34	-0.1703	-0.2957	-0.1416	-0.1037	-0.0395	0.0068	0.1261	-0.0846	-0.0903	0.8943	0.6581
GATES READING TEST	1	35	-0.2017	-0.3647	-0.1452	-0.0771	-0.0592	0.0961	0.0925	-0.1348	-0.0571	0.8754	0.6353
REPEATED GRADE=0,NOT=1	1	36	-0.0742	-0.1366	0.0013	-0.0116	0.0406	0.0336	0.0140	-0.0307	-0.0066	0.3391	0.2365
AVERAGE GRADE:4TH YR	1	37	-0.1815	-0.0803	-0.0268	-0.0847	-0.0473	-0.0260	0.0506	0.0190	-0.0020	0.4597	0.3751
AVERAGE GRADE:10TH YR	2	38	-0.1623	-0.0730	0.0053	-0.0584	-0.0189	0.0140	-0.0033	0.0041	0.0040	0.4341	0.3321
AVERAGE GRADE:12TH YR	3	39	-0.1295	-0.1158	-0.0290	-0.0476	0.0013	-0.0240	0.0297	-0.0040	-0.0263	0.4199	0.3192
# OF HOURS HOMEWORK	1	40	-0.0609	0.0197	-0.0223	0.0045	-0.0912	0.0677	-0.0299	0.0333	0.0354	0.0754	0.0632
# OF HOURS HOMEWORK	2	41	-0.0327	0.0554	-0.0104	0.0055	-0.0170	0.0483	-0.0575	0.0177	0.0395	0.0464	0.0361
# OF HOURS HOMEWORK	3	42	-0.0756	0.0099	-0.0210	0.0067	-0.0343	0.0686	-0.0218	-0.0229	-0.0404	0.1214	0.0679
TRUEN BEHAV IN SCHOOL	1	43	0.3954	0.0413	0.0160	-0.0010	0.0283	-0.0193	0.0085	-0.0112	0.0228	-0.1743	-0.1200
REBEL BEHAV IN SCHOOL	2	44	0.2048	0.0815	-0.0098	0.0524	0.0356	-0.0830	0.0255	0.0326	0.0086	-0.1644	-0.1126
CURRICULUM:COLL PRSP=1	1	45	-0.1378	-0.1376	-0.0462	-0.0032	-0.0455	-0.0469	0.1613	-0.0653	-0.1391	0.4249	0.3656
CURRICULUM:COLL PRSP=1	2	46	-0.1368	-0.1432	0.0006	-0.0255	-0.0622	-0.0382	0.1544	-0.0544	-0.1358	0.4542	0.3811
CURRICULUM:COLL PRSP=1	3	47	-0.1413	-0.0820	-0.0170	-0.0010	-0.0489	-0.0494	0.1619	-0.0626	-0.1292	0.4187	0.3497
COLLEGE PLANS? YES=1	1	48	-0.1145	-0.0542	-0.0171	0.0318	0.0348	-0.0716	0.0390	0.0089	-0.1061	0.3568	0.2949
COLLEGE PLANS? YES=1	2	49	-0.1157	-0.0720	-0.0064	-0.0128	0.0495	-0.0579	0.0291	-0.0079	-0.1316	0.3220	0.2776
COLLEGE PLANS? YES=1	3	50	-0.1843	-0.1020	-0.0513	0.0039	0.0213	-0.0306	0.0488	-0.0316	-0.0807	0.4227	0.3377

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*** OUTPUT CORRELATION MATRIX ***

		VAR	23	24	25	26	27	28	29	30	31	32	33
INTEREST IN COURSES	1	51	0.1391	-0.1327	-0.0335	0.0147	-0.0179	-0.0131	0.0255	0.0047	0.0304	0.0512	0.0371
INTEREST IN COURSES	2	52	0.0930	-0.1092	-0.0354	-0.0086	0.0097	-0.0355	0.0623	-0.0297	-0.0309	0.0924	0.0841
INTEREST IN COURSES	3	53	0.0577	-0.1106	0.0040	0.0277	0.0018	-0.0572	0.0797	-0.0169	-0.0047	0.1004	0.0685
POSITIVE SCH ATTITUDES	1	54	-0.2436	0.0453	-0.0076	0.0262	-0.0596	-0.0387	-0.0107	0.0983	-0.0486	0.0920	0.0759
POSITIVE SCH ATTITUDES	2	55	-0.1800	0.0214	0.0505	0.0066	-0.0631	0.0323	-0.0402	0.0599	-0.0823	0.0900	0.0582
POSITIVE SCH ATTITUDES	3	56	-0.1510	0.0706	0.0358	0.0275	-0.0402	0.0087	-0.0703	0.0912	-0.0453	0.0422	0.0353
NEGATIVE SCH ATTITUDES	1	57	0.4054	0.0864	0.0811	-0.0281	0.0460	-0.0036	-0.0088	-0.0258	0.0503	-0.3185	-0.2408
NEGATIVE SCH ATTITUDES	2	58	0.2546	0.0363	0.0067	-0.0320	0.0376	-0.0786	0.0289	0.0234	0.0801	-0.2773	-0.1903
NEGATIVE SCH ATTITUDES	3	59	0.2509	-0.0119	0.0194	-0.0214	0.0192	-0.0395	0.0156	0.0106	0.0759	-0.2051	-0.1485
ACADEMIC ACHVMENT VALUE	1	60	-0.2446	-0.0107	0.0035	0.0425	-0.0716	-0.0003	0.0110	0.0481	-0.0226	0.2061	0.1610
ACADEMIC ACHVMENT VALUE	2	61	-0.0850	0.0546	0.0827	0.0391	-0.0297	-0.0182	-0.0243	0.0656	-0.0805	0.0352	-0.0093
ACADEMIC ACHVMENT VALUE	3	62	-0.0557	0.0555	0.0442	0.0625	-0.0225	-0.0370	-0.0148	0.0702	-0.0340	-0.0705	-0.1008
SELF-CONCEPT SCHL ABIL	1	63	-0.1392	-0.0703	-0.0354	-0.0215	-0.0327	0.0069	0.0618	-0.0369	-0.0532	0.5578	0.4842
SELF-CONCEPT SCHL ABIL	2	64	-0.1000	-0.0982	-0.0464	0.0005	-0.0321	-0.0181	0.0635	-0.0138	-0.0907	0.5650	0.4771
DOES BEST WORK IN SCHL	1	65	-0.0890	0.0876	0.0896	0.0029	-0.0049	-0.0171	0.0837	-0.0554	-0.0226	-0.0153	-0.0298
DOES BEST WORK IN SCHL	2	66	-0.0368	0.0692	0.0404	-0.0049	-0.0396	-0.0019	0.0253	0.0109	0.0416	-0.0106	-0.0468
WORKS HARDER THAN AVG	1	67	-0.0415	-0.0083	0.0236	0.0108	0.0076	0.0088	0.0316	-0.0443	-0.0307	0.1425	0.1179
WORKS HARDER THAN AVG	2	68	-0.0619	-0.0037	0.0067	0.0302	0.0257	-0.0000	-0.0016	-0.0196	-0.0336	0.0762	0.0581
SATIS W OWN SCHL WORK	1	69	-0.0922	0.0239	0.0001	-0.0331	0.0431	0.0480	0.0087	-0.0926	-0.0000	0.1346	0.1135
SATIS W OWN SCHL WORK	2	70	-0.0877	0.0061	0.0064	-0.0455	0.0501	-0.0185	-0.0375	-0.0057	0.0453	0.0868	0.0461
SELF-ESTEEM	1	71	-0.2961	-0.0091	0.0332	0.0197	-0.0297	-0.0098	0.0451	-0.0070	-0.0586	0.2124	0.1669
SELF-ESTEEM	2	72	-0.2270	-0.0308	0.0473	0.0013	-0.0276	-0.0152	0.0315	0.0090	-0.0044	0.1824	0.1586
SELF-ESTEEM	3	73	-0.1830	-0.0215	0.0296	0.0454	0.0060	-0.0582	0.0392	0.0182	-0.0540	0.1697	0.1549
SELF-ESTEEM	4	74	-0.1806	-0.0471	0.0385	0.0817	0.0046	-0.0280	0.0420	-0.0144	-0.0648	0.1980	0.1664
SELF-ESTEEM	5	75	-0.1218	-0.0499	-0.0357	0.0234	0.0079	-0.0522	0.0363	0.0133	-0.0190	0.1291	0.1203
NEED SOCIAL APPROVAL	1	76	-0.2434	0.1105	0.0558	0.0324	-0.0115	-0.0673	0.0433	0.0386	-0.0263	-0.1262	-0.1200
TEST ANXIETY	1	77	0.2160	0.0577	0.0137	-0.0217	-0.0450	-0.0551	-0.0149	0.1073	-0.0107	-0.2703	-0.2433

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*** OUTPUT CORRELATION MATRIX ***

		VAR	23	24	25	26	27	28	29	30	31	32	33
TEST ANXIETY	2	73	0.1610	0.0269	-0.0057	-0.0181	-0.0273	0.0305	-0.0443	0.0323	-0.0202	-0.2218	-0.1971
NEED SELF-DEVELOPMENT	1	79	-0.1250	0.0087	-0.0284	0.0105	-0.0652	-0.0052	0.0257	0.0354	-0.0226	0.2259	0.1968
NEED SELF-DEVELOPMENT	2	80	-0.1123	-0.0344	-0.0017	0.0015	-0.0607	0.0140	-0.0009	0.0363	-0.0708	0.2428	0.2203
NEED SELF-DEVELOPMENT	3	81	-0.1376	-0.0338	0.0305	0.0409	-0.0602	-0.0103	0.0289	0.0327	-0.0793	0.2237	0.1891
NEED SELF-DEVELOPMENT	4	82	-0.1173	-0.0625	0.0449	0.0692	-0.0628	0.0467	0.0194	-0.0152	-0.0793	0.1828	0.1653
NEED SELF-UTILIZATION	1	83	-0.0750	-0.0736	-0.0509	0.0074	-0.0482	-0.0085	0.0375	0.0139	-0.0395	0.2397	0.1969
NEED SELF-UTILIZATION	2	84	-0.0627	-0.0754	0.0035	-0.0163	-0.0446	-0.0199	0.0534	0.0077	-0.0776	0.2293	0.2031
NEED SELF-UTILIZATION	3	85	-0.0937	-0.0263	0.0245	0.0361	-0.0660	-0.0028	0.0207	0.0372	-0.0802	0.1895	0.1610
NEED SELF-UTILIZATION	4	86	-0.0595	-0.0434	0.0348	0.0891	-0.0694	0.0514	0.0241	-0.0190	-0.0611	0.1736	0.1588
HAPPINESS	1	87	-0.2692	0.0242	0.0091	0.0246	-0.0030	-0.0445	-0.0230	0.0691	0.0214	0.0300	0.0143
HAPPINESS	2	88	-0.2086	-0.0096	-0.0125	-0.0198	0.0127	-0.0173	-0.0500	0.0535	0.0204	0.0150	0.0122
HAPPINESS	3	89	-0.1716	-0.0124	-0.0059	0.0145	0.0186	-0.0522	-0.0105	0.0481	0.0077	0.0139	0.0098
HAPPINESS	4	90	-0.1593	-0.0222	-0.0218	0.0187	0.0135	-0.0401	-0.0141	0.0433	-0.0146	0.0202	0.0076
NEGATIVE AFFECT STATES	1	91	0.4175	0.0066	-0.0115	-0.0093	-0.0033	0.0240	-0.0467	0.0211	0.0239	-0.1241	-0.0919
NEGATIVE AFFECT STATES	2	92	0.2726	-0.0294	-0.0294	0.0106	0.0125	0.0209	-0.0516	0.0161	-0.0075	-0.0499	-0.0360
NEGATIVE AFFECT STATES	3	93	0.2447	0.0367	-0.0126	-0.0109	-0.0108	0.0026	-0.0404	0.0438	0.0273	-0.1019	-0.0947
NEGATIVE AFFECT STATES	4	94	0.2313	0.0327	-0.0083	-0.0126	-0.0045	0.0467	-0.0450	-0.0021	0.0215	-0.1195	-0.1029
SOMATIC SYMPTOMS	1	95	0.5346	0.0911	-0.0044	-0.0375	0.0596	-0.0316	-0.0645	0.0423	0.0194	-0.2396	-0.1816
SOMATIC SYMPTOMS	2	96	0.2544	0.0666	-0.0253	0.0262	0.0106	-0.0322	-0.0692	0.0883	0.0196	-0.1791	-0.1412
SOMATIC SYMPTOMS	3	97	0.1871	0.0813	0.0210	-0.0222	0.0060	-0.0048	-0.0510	0.0477	0.0489	-0.1597	-0.1348
SOMATIC SYMPTOMS	4	98	0.1750	0.0700	0.0167	-0.0313	0.0004	-0.0001	-0.0598	0.0561	0.0623	-0.1884	-0.1563
IMPULSE TO AGGRESSION	1	99	0.3515	-0.0732	-0.0814	-0.0421	0.0064	0.0187	0.0187	-0.0416	0.0039	-0.0047	0.0051
IMPULSE TO AGGRESSION	2	100	0.2303	-0.0520	-0.0769	-0.0333	0.0460	-0.0113	0.0079	-0.0336	-0.0157	0.0807	0.0756
IMPULSE TO AGGRESSION	3	101	0.1857	-0.0765	-0.0531	-0.0567	0.0154	0.0276	-0.0169	-0.0253	-0.0044	0.1147	0.1182
IMPULSE TO AGGRESSION	4	102	0.1627	-0.0307	-0.0956	-0.0678	0.0102	0.0127	0.0149	-0.0353	-0.0158	0.0763	0.0611
SOCIAL VALUES CLUSTER	1	103	-0.2009	-0.0538	-0.0324	0.0103	-0.0407	-0.0040	-0.0478	0.0809	0.0309	0.2412	0.1726
SOCIAL VALUES CLUSTER	2	104	-0.2014	-0.0256	0.0039	-0.0030	-0.0341	0.0036	-0.0522	0.0723	-0.0107	0.1671	0.0953

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*** OUTPUT CORRELATION MATRIX ***

		VAR	23	24	25	26	27	28	29	30	31	32	33
SOCIAL VALUES CLUSTER	3	115	-0.1590	-0.0422	0.0014	0.0085	-0.0258	-0.0198	-0.0508	0.0885	0.0016	0.0974	0.0397
SOCIAL VALUES CLUSTER	4	116	-0.1250	-0.0385	0.0161	0.0306	-0.0115	0.0321	-0.0544	0.0274	0.0087	0.0674	0.0430
INTERNAL CONTROL	1	117	-0.3040	-0.1952	-0.0372	0.0279	-0.0325	0.0083	0.0378	-0.0183	-0.0332	0.2964	0.1967
INTERNAL CONTROL	2	118	-0.2028	-0.0925	-0.0418	-0.0337	0.0250	0.0238	-0.0280	-0.0190	-0.0470	0.2604	0.1834
INTERNAL CONTROL	3	119	-0.1648	-0.0568	-0.0139	-0.0423	0.0201	0.0482	-0.0204	-0.0468	-0.0220	0.2049	0.1353
INTERNAL CONTROL	4	111	-0.1426	-0.0647	-0.0330	-0.0408	-0.0068	0.0122	-0.0218	0.0134	-0.0189	0.1772	0.1196
TRUST IN PEOPLE	1	111	-0.1225	-0.0470	-0.0541	-0.0843	0.0441	0.0471	-0.0634	-0.0262	-0.0146	0.0339	0.0482
TRUST IN PEOPLE	2	112	-0.0990	-0.0421	-0.0453	-0.0787	0.0029	0.0711	-0.0666	-0.0139	0.0421	0.0343	0.0060
TRUST IN PEOPLE	3	113	-0.0341	-0.0753	-0.1049	-0.1320	0.0279	0.0690	-0.0278	-0.0675	0.0277	0.1152	0.0782
TRUST IN PEOPLE	4	114	-0.0785	-0.0779	-0.0892	-0.1158	0.0348	0.0816	-0.0608	-0.1109	0.0099	0.1140	0.0973
TRUST IN GOVERNMENT	1	115	-0.2197	-0.0061	-0.0277	0.0485	-0.0331	0.0486	0.0623	-0.0796	-0.0518	0.1210	0.0854
TRUST IN GOVERNMENT	2	116	-0.1418	-0.0677	-0.0014	0.0221	-0.0153	0.0557	-0.0070	-0.0383	-0.0006	0.0684	0.0309
TRUST IN GOVERNMENT	3	117	-0.1768	-0.0216	-0.0493	-0.0695	-0.0014	0.0688	-0.0448	-0.0276	-0.0155	0.0576	0.0294
TRUST IN GOVERNMENT	4	118	-0.0612	-0.0192	0.0253	-0.0783	-0.0060	0.0617	-0.1078	0.0426	0.0414	-0.0719	-0.0811
TRUST IN GOVERNMENT	5	119	-0.0809	0.0101	-0.0329	-0.0616	-0.0155	0.0012	-0.0704	0.0767	0.0823	-0.0537	-0.0649
INTEREST IN GOVERNMENT	1	120	-0.0131	0.0742	0.0490	-0.0124	-0.0097	-0.0276	-0.0161	0.0510	-0.0265	0.0904	0.1173
INTEREST IN GOVERNMENT	2	121	-0.0577	-0.0013	0.0326	-0.0116	-0.0515	0.0278	-0.0010	0.0144	-0.0629	0.2158	0.2277
INTEREST IN GOVERNMENT	3	122	-0.0611	0.0181	0.0057	0.0006	-0.0116	-0.0124	-0.0087	0.0305	-0.0802	0.1530	0.1857
INTEREST IN GOVERNMENT	4	123	-0.0299	-0.0177	0.0056	0.0197	-0.0424	-0.0150	0.0308	0.0209	-0.0336	0.1966	0.1890
INTEREST IN GOVERNMENT	5	124	-0.0497	-0.0078	0.0043	0.0141	-0.0549	0.0009	0.0295	0.0214	-0.0565	0.2426	0.2268
GOVT SHLD END DISCRIM	1	125	-0.1443	-0.0027	-0.0347	0.0161	0.0398	0.0041	0.0883	-0.1190	-0.0625	0.2447	0.1748
GOVT SHLD END DISCRIM	4	126	-0.0968	0.0093	0.0031	0.0707	0.0669	0.0098	0.0781	-0.1375	-0.0755	0.2240	0.1787
GOVT SHLD END DISCRIM	5	127	-0.0635	0.0541	0.0607	0.0451	-0.0127	-0.0227	0.0417	-0.0047	-0.0373	0.0766	0.0582
SOCIAL DISTANCE (PACH)	1	128	0.0020	0.0142	0.0215	-0.0580	-0.0531	-0.0263	-0.0371	0.1977	0.0689	-0.2122	-0.1760
SOCIAL DISTANCE (PACH)	4	129	0.0550	0.0244	0.0050	-0.0503	-0.0779	-0.0395	-0.1157	0.2125	0.0917	-0.2559	-0.2278
SOCIAL DISTANCE (PACH)	5	130	0.0506	-0.0523	-0.0524	-0.0617	-0.0630	0.0200	-0.0639	0.0907	0.0995	-0.1082	-0.0958
PERCEIVED DISCRIMINAT	1	131	-0.0661	0.0141	-0.0195	0.0810	0.0447	0.0431	0.1237	-0.1958	-0.0858	0.1529	0.1311

*** QUANTILE CORRELATION MATRIX ***

	VAR	23	24	25	26	27	28	29	30	31	32	33
PERCEIVED DISCRIMINATION 4	132	-0.1839	0.0125	0.0331	0.0849	0.0192	0.0303	0.1331	-0.1721	-0.0830	0.2474	0.2000
PERCEIVED DISCRIMINATION 5	133	-0.0736	0.1027	0.0801	0.1344	0.0205	-0.0195	0.1103	-0.0985	-0.1067	0.1953	0.1576
VIETNAM DISSENT 3	134	0.0119	0.0067	0.0452	0.0366	0.0103	-0.0002	0.1130	-0.1141	-0.0615	0.0545	0.0612
VIETNAM DISSENT 4	135	-0.1021	-0.0385	-0.0090	0.0636	0.0510	-0.0067	0.1363	-0.1618	-0.0836	0.1759	0.1636
VIETNAM DISSENT 5	136	0.0118	-0.0403	0.0024	0.0448	0.0235	0.0071	0.1236	-0.1448	-0.1322	0.2738	0.2442
PREP HOPE MILITARY INFL 3	137	0.0209	-0.0024	-0.0482	-0.0007	-0.0280	-0.0262	-0.0840	0.1273	0.1108	-0.1744	-0.1437
PREP HOPE MILITARY INFL 5	138	0.0756	0.0739	0.0453	-0.0094	-0.0331	-0.0223	-0.1026	0.1453	0.0993	-0.3397	-0.2900
ABORTION DISAPPROVAL 4	139	0.0188	0.0614	0.0605	0.0069	0.0132	0.0416	-0.1069	0.0471	0.0388	-0.2732	-0.2435
ABORTION DISAPPROVAL 5	140	-0.0188	0.0684	0.0627	0.0175	0.0240	0.0474	-0.0947	0.0190	0.0921	-0.2382	-0.2204
POPULATION CONCERN 4	141	-0.0811	-0.1630	-0.1206	-0.0635	0.0497	0.0316	-0.0219	-0.0516	-0.0179	0.3416	0.2993
POPULATION CONCERN 5	142	-0.0260	-0.1994	-0.1636	-0.0953	0.0148	0.0070	-0.0368	0.0152	-0.0087	0.3018	0.2764
IDEAL NUMBER CHILDREN 4	143	0.0096	0.0396	0.0125	0.0763	0.0440	-0.0100	0.0710	-0.0911	-0.0081	-0.0843	-0.0673
IDEAL NUMBER CHILDREN 5	144	-0.0061	0.1067	0.0562	0.0664	0.0122	0.0057	0.0258	-0.0398	0.0642	-0.1504	-0.1442
JOB THAT PAYS OFF 1	145	-0.1777	-0.0451	-0.0352	-0.0013	-0.1072	0.0022	0.0450	0.0443	-0.0397	0.1351	0.1109
JOB THAT PAYS OFF 2	146	-0.1029	-0.0224	0.0061	0.0185	-0.0741	-0.0352	0.0710	0.0310	-0.0689	0.0579	0.0361
JOB THAT PAYS OFF 3	147	-0.0358	-0.0331	-0.0038	0.0599	-0.0720	-0.0244	0.0500	0.0374	-0.0738	0.0244	0.0151
JOB THAT PAYS OFF 4	148	-0.0529	-0.0483	0.0120	0.0536	-0.0857	0.0075	0.0512	0.0138	-0.0640	0.0028	0.0024
JOB THAT PAYS OFF 5	149	0.0341	0.0811	0.0227	0.0719	-0.0797	-0.0684	0.0553	0.0854	-0.0344	-0.2013	-0.1669
JOB THAT DOESN'T BUG ME 1	150	0.2180	0.1402	0.0762	0.0215	-0.0480	-0.0620	-0.0060	0.1082	0.0215	-0.2814	-0.2220
JOB THAT DOESN'T BUG ME 2	151	0.1542	0.1180	0.0227	0.0094	-0.0388	-0.0560	-0.0111	0.0992	0.0275	-0.2530	-0.2031
JOB THAT DOESN'T BUG ME 3	152	0.1319	0.1053	0.0747	0.0651	-0.0642	-0.0410	0.0002	0.0944	0.0667	-0.2837	-0.2168
JOB THAT DOESN'T BUG ME 4	153	0.1005	0.0998	0.0640	0.0555	-0.0697	-0.0257	-0.0108	0.0932	0.0453	-0.2504	-0.1947
JOB THAT DOESN'T BUG ME 5	154	0.0624	0.0363	0.0321	0.0344	-0.0774	-0.0037	0.0082	0.0606	-0.0140	-0.0884	-0.0722
AMBITIOUS JOB ATTITUDE 1	155	-0.3025	-0.1543	-0.0994	-0.0204	-0.0217	0.0558	0.0351	-0.0715	-0.0441	0.3303	0.2601
AMBITIOUS JOB ATTITUDE 2	156	-0.2039	-0.1210	-0.0171	0.0025	-0.0107	0.0314	0.0525	-0.0720	-0.0677	0.2641	0.2015
AMBITIOUS JOB ATTITUDE 3	157	-0.1341	-0.1055	-0.0647	-0.0140	0.0084	0.0186	0.0298	-0.0537	-0.0992	0.2446	0.1815
AMBITIOUS JOB ATTITUDE 4	158	-0.1297	-0.1203	-0.0439	-0.0141	0.0042	0.0299	0.0420	-0.0736	-0.0828	0.2165	0.1667

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*** OUTSIDE CORRELATION MATRIX ***

	VAR	23	24	25	26	27	28	29	30	31	32	33
AMBITION FOR ACHIEVEMENT 1	159	-0.1270	-0.0209	-0.0117	-0.0210	0.0109	-0.0436	0.0290	0.0089	-0.0103	-0.0698	-0.0642
STATUS ASPIRED OCCUPAT 1	160	-0.1374	-0.1217	-0.0224	0.0032	-0.0465	-0.0765	0.1226	0.0026	-0.1976	0.4489	0.3735
STATUS ASPIRED OCCUPAT 2	161	-0.1302	-0.1276	-0.0203	0.0256	-0.0475	-0.0359	0.1162	-0.0300	-0.1955	0.4538	0.3770
STATUS ASPIRED OCCUPAT 3	162	-0.1099	-0.1452	-0.0336	0.0171	-0.0579	-0.0512	0.1501	-0.0419	-0.1613	0.4777	0.4071
STATUS ASPIRED OCCUPAT 4	163	-0.1494	-0.1112	-0.0101	0.0459	-0.0536	-0.0195	0.1313	-0.0601	-0.1711	0.4451	0.3660
STATUS ASPIRED OCCUPAT 5	164	-0.0793	-0.0646	-0.0275	0.0522	-0.0551	-0.0317	0.1068	-0.0223	-0.1452	0.4070	0.3235
DELINQ BEHAV IN SCHOOL 1	165	0.2770	0.0791	-0.0108	-0.0051	0.0464	-0.0810	0.0330	0.0145	-0.0188	-0.1693	-0.1091
DELINQ BEHAV IN SCHOOL 2	166	0.2298	0.1673	0.0480	0.0311	0.0250	-0.0932	0.0095	0.0664	0.0234	-0.2355	-0.1679
DELINQ BEHAV IN SCHOOL 3	167	0.1710	0.1665	0.0960	0.0228	0.0232	-0.1173	0.0608	0.0446	-0.0270	-0.2316	-0.1723
SERIOUSNESS OF DELINQ 1	168	0.2817	0.0380	-0.0220	-0.0406	0.1004	-0.0556	0.0102	-0.0340	-0.0376	-0.0550	-0.0225
SERIOUSNESS OF DELINQ 2	169	0.1644	0.1452	0.0172	0.0065	0.0350	-0.0550	-0.0413	0.0660	0.0411	-0.1555	-0.1342
SERIOUSNESS OF DELINQ 3	170	0.1315	0.1602	0.1080	0.0255	0.0591	-0.0692	-0.0069	0.0292	-0.0166	-0.1787	-0.1314
SERIOUSNESS OF DELINQ 4	171	0.0902	0.0695	0.0471	-0.0338	0.0475	-0.0467	0.0139	-0.0038	0.0350	-0.0795	-0.0564
SERIOUSNESS OF DELINQ 5	172	0.0821	0.0200	0.0595	0.0084	0.0122	0.0094	0.0059	-0.0253	-0.0279	-0.0510	-0.0461
INTERPERSONAL AGGRESSION 1	173	0.1115	0.0524	-0.0227	-0.0157	0.0857	-0.0531	0.0117	-0.0260	-0.0419	-0.1229	-0.0601
INTERPERSONAL AGGRESSION 2	174	0.0067	0.2170	0.0284	0.0141	-0.0073	-0.0398	-0.0225	0.0676	0.0390	-0.2413	-0.1756
INTERPERSONAL AGGRESSION 3	175	0.1672	0.2333	0.1512	0.0183	0.0259	-0.0518	-0.0196	0.0502	-0.0142	-0.2925	-0.2206
INTERPERSONAL AGGRESSION 4	176	0.1566	0.1563	0.0552	0.0186	0.0179	-0.0483	0.0163	0.0196	-0.0066	-0.2307	-0.1634
INTERPERSONAL AGGRESSION 5	177	0.1192	0.0670	0.0561	0.0792	0.0234	-0.0056	-0.0259	0.0128	-0.0084	-0.1613	-0.1174
THEFT AND VANDALISM 1	178	0.2536	-0.0150	-0.0433	-0.0558	0.0823	-0.0445	0.0335	-0.0520	-0.0294	0.0278	0.0401
THEFT AND VANDALISM 2	179	0.1383	0.1011	-0.0021	0.0149	0.0463	-0.0512	-0.0478	0.0589	0.0555	-0.0812	-0.0755
THEFT AND VANDALISM 3	180	0.1145	0.1034	0.0484	0.0162	0.0650	-0.0653	-0.0077	0.0211	0.0133	-0.0968	-0.0686
THEFT AND VANDALISM 4	181	0.0551	0.0283	0.0342	-0.0580	0.0381	-0.0386	0.0132	-0.0037	0.0472	-0.0124	-0.0015
THEFT AND VANDALISM 5	182	0.0675	-0.0008	0.0260	-0.0147	0.0214	0.0174	-0.0049	-0.0311	-0.0146	-0.0227	-0.0217
DAILY CIGARETTE USE#1 1	183	0.1219	0.0368	0.0336	0.0024	-0.0499	-0.0754	0.0953	0.0282	-0.0349	-0.1205	-0.0948
DAILY CIGARETTE USE#1 4	184	0.0479	0.0224	0.0570	0.0227	-0.0793	-0.0403	0.0710	0.0447	-0.0110	-0.0908	-0.0688
DAILY CIGARETTE USE#1 5	185	0.0036	0.0660	0.0838	0.0117	-0.0540	-0.0108	0.0303	0.0312	-0.0251	-0.1212	-0.0887

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*** OUTPUT CORRELATION MATRIX ***

		VAR	23	24	25	26	27	28	29	30	31	32	33
ALCOHOL USE 1-6	3	186	0.0761	0.0204	-0.0068	-0.0124	0.0022	-0.0710	0.0400	0.0334	0.0355	-0.0754	-0.0382
ALCOHOL USE 1-6	4	187	0.0580	0.0323	0.0287	-0.0163	-0.0219	-0.0038	0.0291	-0.0056	0.0065	-0.0022	0.0078
ALCOHOL USE 1-6	5	188	0.0418	0.0049	0.0180	0.0068	-0.0129	0.0003	0.0476	-0.0337	-0.0352	-0.0118	-0.0112
MARIJUANA USE 1-6	3	189	0.0569	0.0335	0.0057	0.0775	0.1251	-0.1342	0.1474	-0.1027	-0.1081	0.0193	0.0555
MARIJUANA USE 1-6	4	190	0.0671	-0.0365	0.0093	0.0544	0.1084	-0.1226	0.1509	-0.1037	-0.1226	0.1373	0.1401
MARIJUANA USE 1-6	5	191	0.0996	0.0651	0.0427	0.0573	0.0452	-0.0219	0.0475	-0.0590	-0.1066	0.0632	0.0723
DRUG USE:AMPH,BARR,LSD 3	192	0.0458	0.0666	0.0508	0.0005	0.0946	-0.0923	0.0565	-0.0352	-0.0672	-0.0496	-0.0104	
DRUG USE:AMPH,BARR,LSD 4	193	0.0704	0.0470	0.0409	-0.0033	0.0474	-0.0818	0.0859	-0.0351	-0.0738	0.0055	0.0349	
DRUG USE:AMPH,BARR,LSD 5	194	0.0381	0.0205	-0.0092	-0.0169	0.0166	0.0183	-0.0031	-0.0296	-0.0584	0.0695	0.0657	
SCHOOL MEAN S.E.L.	1	195	-0.0318	-0.4305	-0.0761	-0.0096	0.0881	0.0985	0.1409	-0.3026	-0.1565	0.4013	0.3855
SCHOOL MEAN QUICK TEST 1	196	-0.0610	-0.6512	-0.1732	-0.0035	-0.0268	0.0559	0.2758	-0.2829	-0.1021	0.5140	0.5128	
SCHOOL MEAN GATE-J	1	197	-0.0666	-0.6095	-0.2949	-0.0206	-0.0796	0.0260	0.2346	-0.1768	-0.0693	0.5137	0.4313
SCHOOL MEAN GATES	1	198	-0.0735	-0.6716	-0.2610	-0.0242	-0.0934	0.2029	0.1446	-0.2638	-0.0868	0.5203	0.4513
PARTICIPANT IN 1970=1	4	199	-0.2553	-0.0467	0.0039	0.0419	-0.0574	-0.0029	0.0720	-0.0160	-0.0024	0.0819	0.0545

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*** QUANT CORRELATION MATRIX ***

		VAR	34	35	36	37	38	39	40	41	42	43	44
GATES READING TEST	1	35	0.6973										
REPEATED GRAD=1, TOT=1	1	36	0.3435	0.3213									
AVERAGE GRADE:10TH YR	1	37	0.4559	0.3853	0.3097								
AVERAGE GRADE:11TH YR	2	38	0.4384	0.3811	0.2861	0.6669							
AVERAGE GRADE:12TH YR	3	39	0.4137	0.3675	0.1996	0.5848	0.6573						
# OF HOURS HOMEWORK	1	40	0.1673	0.0633	0.0916	0.2051	0.1713	0.1945					
# OF HOURS HOMEWORK	2	41	0.0598	0.0265	0.0490	0.1330	0.1556	0.1143	0.3076				
# OF HOURS HOMEWORK	3	42	0.1329	0.1218	0.0760	0.2093	0.2470	0.2593	0.2242	0.3452			
PEBEL BEHAV IN SCHOOL	1	43	-0.1644	-0.1919	-0.1406	-0.3330	-0.2984	-0.2803	-0.1627	-0.1680	-0.2183		
PEBEL BEHAV IN SCHOOL	2	44	-0.1596	-0.1626	-0.0799	-0.2603	-0.2876	-0.2911	-0.1682	-0.2058	-0.2723	0.5426	
CURRICULUM:COLL PREP=1	1	45	0.3816	0.3731	0.2439	0.3637	0.2957	0.2663	0.1065	0.0105	0.1622	-0.1850	-0.1045
CURRICULUM:COLL PREP=1	2	46	0.4278	0.3934	0.2807	0.4115	0.4003	0.3213	0.1091	0.0800	0.1891	-0.1996	-0.1654
CURRICULUM:COLL PREP=1	3	47	0.4135	0.3427	0.2610	0.3951	0.3751	0.3253	0.1126	0.1314	0.2389	-0.1712	-0.1480
COLLEGE PLANS? YES=1	1	48	0.3286	0.3192	0.2382	0.3361	0.2736	0.2657	0.0890	0.0762	0.1429	-0.1996	-0.1172
COLLEGE PLANS? YES=1	2	49	0.2960	0.2797	0.2281	0.3359	0.3336	0.2650	0.0715	0.0960	0.1520	-0.1771	-0.1656
COLLEGE PLANS? YES=1	3	50	0.3982	0.3804	0.2621	0.4405	0.4224	0.4270	0.1031	0.1172	0.1945	-0.2597	-0.2695
INTEREST IN COURSES	1	51	0.0406	0.0549	-0.0816	-0.1810	-0.1730	-0.1353	-0.0963	-0.0942	-0.1745	0.3151	0.2472
INTEREST IN COURSES	2	52	0.0711	0.0696	0.0242	-0.1149	-0.1541	-0.1405	-0.1095	-0.1390	-0.2112	0.2571	0.3570
INTEREST IN COURSES	3	53	0.1001	0.0992	0.0507	-0.0848	-0.0903	-0.1874	-0.0784	-0.1279	-0.2542	0.1641	0.2091
POSITIVE SCH ATTITUDES	1	54	0.0889	0.0846	0.1195	0.2879	0.2405	0.2046	0.1675	0.1327	0.1545	-0.4247	-0.3073
POSITIVE SCH ATTITUDES	2	55	0.1035	0.0812	0.0617	0.2607	0.2765	0.2703	0.1550	0.1948	0.2064	-0.3161	-0.4583
POSITIVE SCH ATTITUDES	3	56	0.0247	0.0536	-0.0095	0.2321	0.2221	0.2927	0.1256	0.1618	0.2604	-0.2429	-0.3043
NEGATIVE SCH ATTITUDES	1	57	-0.2877	-0.3222	-0.1697	-0.3411	-0.2843	-0.2649	-0.1221	-0.0858	-0.1123	0.4804	0.3034
NEGATIVE SCH ATTITUDES	2	58	-0.2571	-0.2867	-0.1432	-0.2846	-0.2877	-0.2369	-0.1091	-0.1695	-0.1884	0.3110	0.4772
NEGATIVE SCH ATTITUDES	3	59	-0.1708	-0.2222	-0.1082	-0.2617	-0.2559	-0.3095	-0.0787	-0.1372	-0.2407	0.2878	0.3501
ACADEMIC ACHVMT VALUE	1	60	0.1847	0.2052	0.1763	0.2611	0.2107	0.2010	0.1336	0.0638	0.1400	-0.3929	-0.2143
ACADEMIC ACHVMT VALUE	2	61	0.0523	0.0571	0.0695	0.1293	0.1550	0.1218	0.1188	0.1240	0.1848	-0.2227	-0.2943

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*** OUTPUT CORRELATION MATRIX ***

		VAP	34	35	36	37	38	39	40	41	42	43	44
ACADEMIC ACHIEVEMENT VALUE 3	62	-0.0426	-0.0326	-0.0368	0.0370	0.0454	0.0824	0.0662	0.0943	0.1816	-0.1729	-0.1957	
SELF-CONCEPT SCHL ABIL 1	63	0.5528	0.4397	0.2743	0.5096	0.4921	0.4098	0.1055	0.1184	0.1267	-0.2059	-0.1438	
SELF-CONCEPT SCHL ABIL 2	64	0.5723	0.4456	0.2503	0.4844	0.5155	0.4619	0.0928	0.1261	0.1731	-0.1537	-0.1399	
DOES BEST WORK IN SCHL 1	65	0.0049	-0.0138	0.1269	0.2829	0.2442	0.2166	0.2233	0.1199	0.1531	-0.3095	-0.2382	
DOES BEST WORK IN SCHL 2	66	0.0326	-0.0110	0.0838	0.2572	0.3386	0.3169	0.1620	0.2187	0.2469	-0.2284	-0.3481	
WORKS HARDER THAN AVG 1	67	0.1529	0.1105	0.1797	0.3326	0.3374	0.3236	0.2322	0.1614	0.1887	-0.2978	-0.2058	
WORKS HARDER THAN AVG 2	68	0.0942	0.0469	0.1052	0.2519	0.3311	0.3144	0.1485	0.2297	0.3004	-0.2168	-0.3130	
SATIS W OWN SCHL WORK 1	69	0.1505	0.0983	0.1481	0.3402	0.3463	0.3219	0.1046	0.0564	0.1131	-0.2181	-0.1835	
SATIS W OWN SCHL WORK 2	70	0.1181	0.0577	0.0903	0.2721	0.3703	0.3390	0.1157	0.0712	0.1475	-0.1754	-0.2492	
SELF-ESTEEM 1	71	0.2052	0.1997	0.1574	0.2620	0.2463	0.2136	0.1236	0.1090	0.1142	-0.3565	-0.2143	
SELF-ESTEEM 2	72	0.1523	0.1732	0.0664	0.2142	0.2530	0.2488	0.0756	0.1009	0.1405	-0.2588	-0.2671	
SELF-ESTEEM 3	73	0.1484	0.1552	0.0669	0.1697	0.1957	0.2058	0.0554	0.0636	0.1498	-0.1794	-0.1936	
SELF-ESTEEM 4	74	0.1786	0.1909	0.0312	0.1584	0.1583	0.1448	0.0498	0.0624	0.1022	-0.2017	-0.1700	
SELF-ESTEEM 5	75	0.0928	0.1409	0.0097	0.1173	0.1367	0.1219	0.0167	0.0392	0.0590	-0.1535	-0.0994	
NEED SOCIAL APPROVAL 1	76	-0.1240	-0.1033	-0.0183	0.0471	0.0300	0.0389	0.0722	0.0834	0.1148	-0.4059	-0.3120	
TEST ANXIETY 1	77	-0.2379	-0.2437	-0.1224	-0.1736	-0.1587	-0.1726	0.0523	0.0286	-0.0724	0.1521	0.1097	
TEST ANXIETY 2	78	-0.2040	-0.1848	-0.1229	-0.1297	-0.1077	-0.1388	0.0345	0.0328	-0.0260	0.0964	0.1331	
NEED SELF-DEVELOPMENT 1	79	0.2100	0.1946	0.1374	0.2747	0.2694	0.2191	0.1517	0.1682	0.1734	-0.2928	-0.1942	
NEED SELF-DEVELOPMENT 2	80	0.2183	0.2172	0.0979	0.2291	0.2592	0.2568	0.1357	0.1571	0.1930	-0.2037	-0.2361	
NEED SELF-DEVELOPMENT 3	81	0.2044	0.2039	0.0603	0.1856	0.2025	0.2409	0.0850	0.1390	0.2124	-0.1951	-0.2191	
NEED SELF-DEVELOPMENT 4	82	0.1418	0.1897	0.0516	0.1365	0.1564	0.1735	0.0925	0.1046	0.1280	-0.1653	-0.1494	
NEED SELF-UTILIZATION 1	83	0.2112	0.2324	0.1054	0.1649	0.1663	0.1354	0.1014	0.0887	0.0953	-0.1689	-0.1135	
NEED SELF-UTILIZATION 2	84	0.2003	0.2053	0.0839	0.1617	0.1670	0.1970	0.0772	0.1060	0.1430	-0.1306	-0.1788	
NEED SELF-UTILIZATION 3	85	0.1584	0.1691	0.0357	0.1316	0.1490	0.1693	0.0435	0.0732	0.1611	-0.1350	-0.1830	
NEED SELF-UTILIZATION 4	86	0.1304	0.1791	0.0483	0.0823	0.0797	0.1159	0.0599	0.0645	0.1257	-0.1140	-0.0855	
HAPPINESS 1	87	0.0357	0.0343	0.0674	0.1193	0.1340	0.1188	0.0676	0.0548	0.0708	-0.2889	-0.1709	
HAPPINESS 2	88	0.0066	0.0254	0.0070	0.0892	0.1284	0.1442	0.0312	0.0599	0.0574	-0.2458	-0.2530	

*** OUTPUT CORRELATION MATRIX ***

		VAR	34	35	36	37	38	39	40	41	42	43	44
HAPPINESS	3	89	0.0007	0.0366	0.0145	0.0568	0.0839	0.1226	0.0189	0.0145	0.0966	-0.1702	-0.1880
HAPPINESS	4	91	0.0276	0.0275	0.0264	0.0247	0.0643	0.0460	0.0241	-0.0019	0.0425	-0.1791	-0.1628
NEGATIVE AFFECT STATES 1	91	91	-0.1097	-0.1279	-0.0818	-0.1442	-0.1209	-0.1311	-0.0265	-0.0180	-0.0613	0.3987	0.2341
NEGATIVE AFFECT STATES 2	92	92	-0.0328	-0.0382	-0.0154	-0.0812	-0.1234	-0.1229	-0.0416	-0.0449	-0.0800	0.2684	0.3370
NEGATIVE AFFECT STATES 3	93	93	-0.0812	-0.0974	-0.0408	-0.0788	-0.1125	-0.1386	-0.0158	-0.0567	-0.1037	0.2096	0.2574
NEGATIVE AFFECT STATES 4	94	94	-0.1126	-0.1048	-0.0417	-0.0731	-0.1153	-0.0845	-0.0103	-0.0277	-0.0659	0.2146	0.2403
SONATIC SYMPTOMS	1	95	-0.1944	-0.2598	-0.1176	-0.1732	-0.1564	-0.1882	-0.0118	-0.0044	-0.0800	0.4121	0.2073
SONATIC SYMPTOMS	2	96	-0.1625	-0.1801	-0.0815	-0.1591	-0.1785	-0.1878	-0.0119	-0.0122	-0.0508	0.2653	0.3934
SONATIC SYMPTOMS	3	97	-0.1252	-0.1736	-0.0777	-0.1327	-0.1392	-0.1659	0.0159	-0.0064	-0.0825	0.2248	0.2812
SONATIC SYMPTOMS	4	98	-0.1671	-0.1794	-0.0917	-0.1365	-0.1317	-0.1508	0.0116	0.0082	-0.0642	0.2338	0.2540
IMPULSE TO AGGRESSION	1	99	0.0025	-0.0274	-0.0603	-0.1818	-0.1648	-0.1577	-0.0868	-0.0886	-0.1726	0.5451	0.3750
IMPULSE TO AGGRESSION	2	100	0.0762	0.0553	0.0342	-0.0707	-0.0952	-0.1195	-0.1229	-0.1331	-0.1700	0.3146	0.4572
IMPULSE TO AGGRESSION	3	101	0.0876	0.0959	0.0365	-0.0061	-0.0423	-0.0990	-0.0483	-0.0757	-0.1557	0.2237	0.2964
IMPULSE TO AGGRESSION	4	102	0.0730	0.0662	0.0326	-0.0028	-0.0078	-0.0324	-0.0261	-0.0276	-0.0484	0.2135	0.2491
SOCIAL VALUES CLUSTER	1	103	0.2218	0.2523	0.1672	0.2499	0.2188	0.2280	0.1180	0.0602	0.1430	-0.4330	-0.2635
SOCIAL VALUES CLUSTER	2	104	0.1559	0.2025	0.1019	0.1752	0.2035	0.1762	0.1149	0.1266	0.1317	-0.2770	-0.3761
SOCIAL VALUES CLUSTER	3	105	0.0914	0.1366	0.0222	0.1044	0.1093	0.1519	0.0576	0.1033	0.1853	-0.2074	-0.2716
SOCIAL VALUES CLUSTER	4	106	0.1595	0.1853	0.0092	0.0494	0.0731	0.0791	0.0238	0.0719	0.1119	-0.2054	-0.2421
INTERNAL CONTROL	1	107	0.2665	0.3113	0.1399	0.2432	0.2687	0.2175	0.0689	0.0205	0.0974	-0.2803	-0.1973
INTERNAL CONTROL	2	108	0.2269	0.2750	0.0859	0.1907	0.2188	0.1896	0.0506	0.0422	0.1189	-0.2184	-0.2872
INTERNAL CONTROL	3	109	0.1762	0.2254	0.0468	0.1124	0.1475	0.1375	0.0198	0.0139	0.1678	-0.1828	-0.1898
INTERNAL CONTROL	4	110	0.1476	0.2016	0.0634	0.1029	0.1094	0.1009	0.0002	-0.0240	0.0989	-0.1775	-0.1582
TRUST IN PEOPLE	1	111	0.0065	0.0299	-0.0134	0.0678	0.0473	0.0659	0.0041	0.0155	0.0310	-0.1520	-0.1225
TRUST IN PEOPLE	2	112	0.0307	0.0506	0.0194	0.0500	0.0602	0.0881	0.0247	0.0161	0.0334	-0.0927	-0.1724
TRUST IN PEOPLE	3	113	0.0059	0.1154	0.0541	0.1163	0.1113	0.1410	0.0428	0.0322	0.1006	-0.1483	-0.1899
TRUST IN PEOPLE	4	114	0.0062	0.1090	0.0396	0.0746	0.0632	0.0870	0.0153	0.0429	0.0498	-0.0905	-0.1465
TRUST IN GOVERNMENT	1	115	0.0387	0.1551	0.0648	0.0788	0.0818	0.0882	0.0089	-0.0050	0.0612	-0.2118	-0.1399

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*** QUANT CORRELATION MATRIX ***

		VAR	34	35	36	37	38	39	40	41	42	43	44
TRUST IN GOVERNMENT	2	116	0.0581	0.0979	0.0113	0.0618	0.0390	0.0562	0.0164	0.0533	0.0570	-0.1619	-0.2144
TRUST IN GOVERNMENT	3	117	0.0310	0.1018	0.0141	0.0339	0.0303	0.0566	0.0532	0.0436	0.0984	-0.1183	-0.1542
TRUST IN GOVERNMENT	4	118	-0.0724	-0.0231	-0.0358	-0.0217	-0.0468	-0.0506	0.0040	-0.0038	0.0363	-0.1186	-0.1123
TRUST IN GOVERNMENT	5	119	-0.0639	-0.0015	-0.0481	0.0056	-0.0036	-0.0203	0.0535	0.0062	0.0272	-0.0928	-0.1010
INTEREST IN GOVERNMENT	1	120	0.0786	0.0340	0.0684	0.1623	0.1803	0.1381	0.0839	0.0514	0.0753	-0.1243	-0.1034
INTEREST IN GOVERNMENT	2	121	0.1849	0.1580	0.0820	0.2131	0.2317	0.2219	0.0982	0.0452	0.1108	-0.1583	-0.1555
INTEREST IN GOVERNMENT	3	122	0.1297	0.0905	0.0505	0.1653	0.1989	0.2412	0.0875	0.0740	0.1508	-0.1257	-0.1186
INTEREST IN GOVERNMENT	4	123	0.1715	0.1670	0.0488	0.1575	0.1984	0.2056	0.0488	0.0577	0.1187	-0.0969	-0.1147
INTEREST IN GOVERNMENT	5	124	0.2192	0.1980	0.0607	0.1953	0.1742	0.2019	0.0524	0.0969	0.1308	-0.0688	-0.0894
GOVT SHLD END DISCRIM	3	125	0.2405	0.2338	0.0839	0.1227	0.1492	0.1729	0.0038	0.0715	0.0898	-0.1075	-0.1189
GOVT SHLD END DISCRIM	4	126	0.2161	0.1964	0.1052	0.1060	0.1374	0.1342	-0.0023	0.0925	0.0702	-0.0630	-0.1203
GOVT SHLD END DISCRIM	5	127	0.0898	0.0610	0.0124	0.0380	0.0448	0.0760	0.0206	0.0303	0.0902	-0.0760	-0.0427
SOCIAL DISTANCE (RACE)	3	128	-0.1922	-0.1924	-0.1015	-0.1002	-0.1158	-0.1299	-0.0050	-0.0683	-0.1044	0.1201	0.1721
SOCIAL DISTANCE (RACE)	4	129	-0.2179	-0.2341	-0.0800	-0.1375	-0.1577	-0.1562	0.0286	-0.0588	-0.0955	0.0995	0.1437
SOCIAL DISTANCE (RACE)	5	130	-0.1015	-0.0847	-0.0021	-0.0476	-0.0717	-0.0962	0.0234	-0.0551	-0.0448	0.0969	0.0895
PERCEIVED DISCRIMINATN	3	131	0.1608	0.1136	0.0536	0.0441	0.0739	0.0463	0.0013	0.0684	0.0506	-0.0041	-0.0077
PERCEIVED DISCRIMINATN	4	132	0.2446	0.2151	0.1368	0.1504	0.1584	0.1350	0.0404	0.0907	0.0731	-0.0480	-0.0231
PERCEIVED DISCRIMINATN	5	133	0.2032	0.1563	0.1059	0.1290	0.1437	0.1375	0.0162	0.0324	0.0712	-0.0529	-0.0203
VIETNAM DISSENT	3	134	0.0671	0.0066	0.0728	0.0603	0.0526	0.0639	0.0478	0.0006	0.0146	0.0153	0.0548
VIETNAM DISSENT	4	135	0.1865	0.1069	0.1275	0.1235	0.1584	0.1590	0.0492	0.0648	0.0534	0.0325	0.0367
VIETNAM DISSENT	5	136	0.2757	0.1983	0.1261	0.1526	0.1514	0.1938	-0.0085	-0.0170	0.0763	0.0252	0.0354
PREP MORE MILITARY INFL	3	137	-0.1758	-0.1398	-0.1686	-0.1620	-0.1455	-0.1503	-0.0408	-0.0537	-0.0737	0.0414	0.0245
PREP MORE MILITARY INFL	5	138	-0.3324	-0.2661	-0.1866	-0.1959	-0.1850	-0.2102	0.0100	-0.0332	-0.0575	0.0336	0.0563
ABORTION DISAPPROVAL	4	139	-0.2511	-0.2222	-0.1054	-0.1041	-0.1277	-0.1031	-0.0026	0.0268	0.0036	-0.0237	-0.0075
ABORTION DISAPPROVAL	5	140	-0.2065	-0.1984	-0.1135	-0.0936	-0.1109	-0.1050	0.0022	0.0442	-0.0598	-0.0074	0.0180
POPULATION CONCERN	4	141	0.3073	0.2963	0.1497	0.1877	0.1903	0.1656	0.0405	0.0462	0.0685	-0.0745	-0.1289
POPULATION CONCERN	5	142	0.2697	0.2507	0.1158	0.1228	0.1778	0.1593	-0.0018	0.0255	0.0619	-0.0343	-0.0525

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*** OUTPUT CORRELATION MATRIX ***

		VAR	34	35	36	37	38	39	40	41	42	43	44
IDEAL NUMBER CHILDREN	4	143	-0.0872	-0.0716	-0.0023	-0.0559	-0.0891	-0.0724	-0.0391	-0.0134	0.0163	-0.0058	-0.0013
IDEAL NUMBER CHILDREN	5	144	-0.1385	-0.1127	-0.0369	-0.0292	-0.0670	-0.0633	-0.0061	0.0238	0.0001	-0.0020	-0.0077
JOB THAT PAYS OFF	1	145	0.0951	0.1589	0.0513	0.1200	0.1790	0.0888	0.0370	0.0132	0.0612	-0.2220	-0.1086
JOB THAT PAYS OFF	2	146	0.0534	0.0745	0.0412	0.0573	0.0604	0.0426	-0.0174	-0.0073	-0.0172	-0.0850	-0.1094
JOB THAT PAYS OFF	3	147	-0.0046	0.0533	-0.0251	0.0036	0.0370	0.0437	0.0021	0.0040	0.0371	-0.0299	-0.0839
JOB THAT PAYS OFF	4	148	-0.0264	0.0335	0.0159	-0.0277	-0.0231	-0.0282	0.0125	-0.0484	-0.0247	-0.0658	-0.0497
JOB THAT PAYS OFF	5	149	-0.2020	-0.1534	-0.0950	-0.0717	-0.0873	-0.0522	0.0130	-0.0459	0.0039	-0.0278	-0.0120
JOB THAT DOESNT BUG ME	1	150	-0.2694	-0.2586	-0.0569	-0.1511	-0.1856	-0.1879	-0.0647	-0.0784	-0.1221	0.2090	0.1821
JOB THAT DOESNT BUG ME	2	151	-0.2221	-0.2532	-0.0433	-0.0923	-0.1131	-0.1187	-0.0572	-0.0951	-0.1436	0.1496	0.2280
JOB THAT DOESNT BUG ME	3	152	-0.2614	-0.2781	-0.0802	-0.1213	-0.1284	-0.1398	-0.0461	-0.1247	-0.1748	0.1440	0.1864
JOB THAT DOESNT BUG ME	4	153	-0.2341	-0.2446	-0.0403	-0.0961	-0.1036	-0.1166	-0.0012	-0.0813	-0.1509	0.1118	0.1670
JOB THAT DOESNT BUG ME	5	154	-0.0673	-0.0998	-0.0090	0.0618	0.0030	-0.0121	-0.0149	-0.0375	-0.0166	0.0850	0.0768
AMBITIOUS JOB ATTITUDE	1	155	0.3003	0.3236	0.0834	0.2067	0.2114	0.2252	0.0818	0.0789	0.1499	-0.3242	-0.2359
AMBITIOUS JOB ATTITUDE	2	156	0.2356	0.2718	0.0646	0.1159	0.1374	0.1311	0.0417	0.0835	0.1234	-0.1896	-0.2762
AMBITIOUS JOB ATTITUDE	3	157	0.2104	0.2554	0.0448	0.1002	0.1265	0.1382	0.0421	0.1049	0.1659	-0.1371	-0.2092
AMBITIOUS JOB ATTITUDE	4	158	0.1861	0.2275	0.0490	0.0607	0.0751	0.0740	0.0074	0.0301	0.1139	-0.1442	-0.1862
AMBITIOUS JOB ATTITUDE	5	159	-0.0434	-0.0307	-0.0576	-0.1070	-0.0701	-0.0306	0.0201	-0.0038	0.0186	-0.0918	-0.0753
STATUS ASPIRED OCCUPAT	1	160	0.4139	0.4076	0.2693	0.4003	0.3132	0.2806	0.1242	0.1016	0.1262	-0.2563	-0.1571
STATUS ASPIRED OCCUPAT	2	161	0.4374	0.3901	0.2508	0.4099	0.3926	0.3541	0.0875	0.0903	0.1388	-0.2061	-0.1737
STATUS ASPIRED OCCUPAT	3	162	0.4462	0.3940	0.2442	0.4232	0.3772	0.3765	0.1234	0.1290	0.2061	-0.2054	-0.1702
STATUS ASPIRED OCCUPAT	4	163	0.4256	0.3880	0.1985	0.4111	0.3851	0.3647	0.0952	0.1302	0.2122	-0.1958	-0.1832
STATUS ASPIRED OCCUPAT	5	164	0.3921	0.3650	0.2297	0.3917	0.3709	0.3635	0.0925	0.1223	0.1536	-0.1600	-0.1217
DELINQ BEHAV IN SCHOOL	1	165	-0.1701	-0.1782	-0.2223	-0.3095	-0.2404	-0.2124	-0.1229	-0.1230	-0.1666	0.5457	0.3930
DELINQ BEHAV IN SCHOOL	2	166	-0.2202	-0.2421	-0.1611	-0.3198	-0.2984	-0.3033	-0.1155	-0.1849	-0.2203	0.4503	0.5602
DELINQ BEHAV IN SCHOOL	3	167	-0.2118	-0.2269	-0.1277	-0.2845	-0.2863	-0.3317	-0.1168	-0.1944	-0.2414	0.3755	0.4851
SERIOUSNESS OF DELINQ	1	168	-0.1435	-0.0818	-0.1192	-0.1916	-0.1234	-0.1168	-0.0892	-0.0667	-0.0965	0.4750	0.3387
SERIOUSNESS OF DELINQ	2	169	-0.1343	-0.1434	-0.0310	-0.1528	-0.1469	-0.1931	-0.0711	-0.1208	-0.1179	0.2951	0.4592

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*** OUTPUT CORRELATION MATRIX ***

	VAR	34	35	36	37	38	39	40	41	42	43	44
SERIOUSNESS OF DELINQ	3 170	-0.1452	-0.1916	-0.0635	-0.1307	-0.1284	-0.2028	-0.0637	-0.0919	-0.1310	0.2251	0.3514
SERIOUSNESS OF DELINQ	4 171	-0.0625	-0.0961	0.0335	-0.1091	-0.0920	-0.1559	-0.0888	-0.1207	-0.1152	0.2308	0.2647
SERIOUSNESS OF DELINQ	5 172	-0.0518	-0.0334	-0.0099	-0.1237	-0.0918	-0.1371	-0.0773	-0.0995	-0.0388	0.2108	0.1942
INTERPERSONAL AGGRESSION	1 173	-0.1339	-0.1403	-0.1763	-0.2706	-0.2226	-0.1660	-0.1101	-0.0756	-0.1265	0.5456	0.4087
INTERPERSONAL AGGRESSION	2 174	-0.2318	-0.2376	-0.0939	-0.1871	-0.1087	-0.1810	-0.0592	-0.0896	-0.0998	0.3005	0.4195
INTERPERSONAL AGGRESSION	3 175	-0.2514	-0.3026	-0.1275	-0.1902	-0.1610	-0.1978	-0.0667	-0.0822	-0.0998	0.2599	0.3417
INTERPERSONAL AGGRESSION	4 176	-0.2099	-0.2278	-0.1144	-0.1651	-0.1477	-0.1948	-0.0695	-0.0953	-0.0747	0.2396	0.2686
INTERPERSONAL AGGRESSION	5 177	-0.1533	-0.1586	-0.0965	-0.1536	-0.1081	-0.1579	-0.0741	-0.0676	-0.0700	0.2098	0.1372
THEFT AND VANDALISM	1 178	0.0211	0.0023	-0.0689	-0.1507	-0.0837	-0.0929	-0.1018	-0.0811	-0.1121	0.4658	0.3462
THEFT AND VANDALISM	2 179	-0.0629	-0.0775	0.0016	-0.1178	-0.1168	-0.1714	-0.0772	-0.1222	-0.1317	0.2967	0.4715
THEFT AND VANDALISM	3 180	-0.0726	-0.1102	-0.0107	-0.0880	-0.1050	-0.1723	-0.0776	-0.1135	-0.1462	0.2300	0.3663
THEFT AND VANDALISM	4 181	-0.0077	-0.0143	0.0057	-0.0739	-0.0788	-0.1411	-0.1060	-0.1306	-0.1352	0.2240	0.2800
THEFT AND VANDALISM	5 182	-0.0251	-0.0118	0.0101	-0.0942	-0.0822	-0.1105	-0.0682	-0.0794	-0.0252	0.2037	0.1876
DAILY CIGARETTE USE=1	3 183	-0.1210	-0.1061	-0.1144	-0.2432	-0.2588	-0.2594	-0.0968	-0.1359	-0.1630	0.1959	0.2718
DAILY CIGARETTE USE=1	4 184	-0.0877	-0.0797	-0.0927	-0.2279	-0.2216	-0.2233	-0.0859	-0.1297	-0.1786	0.1874	0.2524
DAILY CIGARETTE USE=1	5 185	-0.1194	-0.1096	-0.1380	-0.2012	-0.1888	-0.1787	-0.0525	-0.0780	-0.0966	0.1535	0.2178
ALCOHOL USE 1-6	3 186	-0.0749	-0.0831	-0.0625	-0.1835	-0.1608	-0.1838	-0.1223	-0.1719	-0.1945	0.2320	0.3196
ALCOHOL USE 1-6	4 187	-0.0156	0.0072	-0.0277	-0.1165	-0.0912	-0.1154	-0.0604	-0.1036	-0.1505	0.1934	0.2528
ALCOHOL USE 1-6	5 188	-0.0180	-0.0013	0.0056	-0.0789	-0.0614	-0.1122	-0.0617	-0.0895	-0.0882	0.1297	0.1835
MARIJUANA USE 1-6	3 189	0.0134	-0.0207	0.0234	-0.1210	-0.1185	-0.1331	-0.0637	-0.0862	-0.0801	0.1742	0.1833
MARIJUANA USE 1-6	4 190	0.1231	0.0942	0.0605	-0.0534	-0.0335	-0.0801	-0.0866	-0.0697	-0.0640	0.1306	0.1707
MARIJUANA USE 1-6	5 191	0.0617	0.0359	0.0327	-0.0602	-0.0753	-0.0939	-0.0350	-0.0664	-0.0418	0.2026	0.1716
DRUG USE: AMPH, BARB, LSD	3 192	-0.0468	-0.0644	-0.0206	-0.1241	-0.1088	-0.1179	-0.0403	-0.0745	-0.0304	0.1227	0.1211
DRUG USE: AMPH, BARB, LSD	4 193	0.0158	-0.0258	-0.0175	-0.0768	-0.0718	-0.1404	-0.0671	-0.0779	-0.0541	0.1091	0.1557
DRUG USE: AMPH, BARB, LSD	5 194	0.0703	0.0558	-0.0018	-0.0809	-0.0627	-0.0839	-0.0154	-0.0655	-0.0298	0.1783	0.1404
SCHOOL MEAN S.T.D.	1 195	0.3206	0.3486	0.1534	0.0504	0.0510	0.0558	0.0120	0.0175	0.0218	-0.0306	-0.0619
SCHOOL MEAN QUICK TEST	1 196	0.3815	0.4454	0.1405	0.1280	0.0981	0.1370	0.0123	-0.0367	0.0127	-0.0445	-0.0756

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*** OUTSIDE CORRELATION MATRIX ***

	VAP	34	35	36	37	38	39	40	41	42	43	44
SCHOOL MEAN GATB-J	1 197	0.4632	0.4649	0.1513	0.1259	0.1096	0.1231	0.0624	0.0128	0.0376	-0.0607	-0.0841
SCHOOL MEAN GATES	1 198	0.4190	0.5116	0.1421	0.1073	0.0951	0.1128	0.0408	-0.0263	0.0407	-0.0786	-0.0953
PARTICIPANT IN 1970=1	4 199	0.0829	0.0822	0.1979	0.1298	0.0799	0.0302	0.0874	0.0290	0.0021	-0.1340	-0.0499

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*** OUTPUT CORRELATION MATRIX ***

	VAR	45	46	47	48	49	50	51	52	53	54	55	
CURRICULUM:COLL PREP=1 2	46	0.6440											
CURRICULUM:COLL PREP=1 3	47	0.5641	0.7143										
COLLEGE PLANS? YES=1	1	48	0.3991	0.4384	0.3839								
COLLEGE PLANS? YES=1 2	2	49	0.3635	0.4544	0.4128	0.4374							
COLLEGE PLANS? YES=1 3	3	50	0.4150	0.5056	0.4956	0.4114	0.5085						
INTEREST IN COURSES	1	51	-0.0593	-0.0934	-0.0827	-0.0969	-0.0737	-0.1286					
INTEREST IN COURSES	2	52	0.0101	-0.0335	-0.0623	-0.0353	-0.0615	-0.1056	0.4015				
INTEREST IN COURSES	3	53	0.0479	0.0414	0.0083	0.0461	-0.0043	-0.0585	0.3587	0.4450			
POSITIVE SCH ATTITUDES 1	54	0.1689	0.1977	0.1824	0.2130	0.1626	0.2426	-0.4797	-0.3375	-0.2432			
POSITIVE SCH ATTITUDES 2	55	0.1325	0.2296	0.2107	0.1410	0.1964	0.2585	-0.3307	-0.4800	-0.2948	0.5242		
POSITIVE SCH ATTITUDES 3	56	0.0272	0.0717	0.1152	0.0795	0.1098	0.2101	-0.3146	-0.4047	-0.5127	0.4277	0.5652	
NEGATIVE SCH ATTITUDES 1	57	-0.2604	-0.2961	-0.2761	-0.2733	-0.2543	-0.3471	0.3212	0.1700	0.1071	-0.5109	-0.3529	
NEGATIVE SCH ATTITUDES 2	58	-0.1884	-0.2596	-0.2379	-0.2312	-0.2286	-0.2974	0.2388	0.2807	0.1934	-0.3583	-0.4963	
NEGATIVE SCH ATTITUDES 3	59	-0.1336	-0.1903	-0.2062	-0.1656	-0.1674	-0.3248	0.2402	0.2863	0.3245	-0.3144	-0.3790	
ACADEMIC ACHVEMT VALUE 1	60	0.2070	0.2021	0.1911	0.2308	0.1844	0.2293	-0.2495	-0.1777	-0.1175	0.5093	0.3083	
ACADEMIC ACHVEMT VALUE 2	61	0.0962	0.1287	0.1199	0.1031	0.1566	0.1625	-0.1846	-0.2805	-0.1654	0.3012	0.4545	
ACADEMIC ACHVEMT VALUE 3	62	-0.0244	-0.0228	0.0031	-0.0293	0.0242	0.0335	-0.1493	-0.2272	-0.2302	0.1944	0.2631	
SELF-CONCEPT SCHL ABIL 1	63	0.3329	0.3987	0.3852	0.3639	0.3234	0.3717	-0.1301	-0.0487	-0.0370	0.2528	0.2295	
SELF-CONCEPT SCHL ABIL 2	64	0.3190	0.3865	0.3655	0.3147	0.3224	0.3783	-0.0900	-0.0558	-0.0108	0.1909	0.2320	
DOES BEST WORK IN SCHL 1	65	0.0653	0.1112	0.1166	0.0904	0.0947	0.1283	-0.2555	-0.1629	-0.1652	0.2440	0.1733	
DOES BEST WORK IN SCHL 2	66	0.0226	0.0500	0.0872	-0.0019	0.0285	0.1352	-0.1885	-0.2797	-0.1935	0.1808	0.2357	
WORKS HARDER THAN AVG 1	67	0.1361	0.1754	0.1987	0.1031	0.1562	0.2155	-0.1713	-0.0983	-0.0738	0.2144	0.1736	
WORKS HARDER THAN AVG 2	68	0.0866	0.1513	0.1639	0.0823	0.1484	0.2255	-0.1368	-0.1801	-0.1230	0.1664	0.2094	
SAYS I OWE SCHL WORK 1	69	0.0733	0.1281	0.1182	0.0992	0.0875	0.1412	-0.2054	-0.1593	-0.1505	0.1939	0.1651	
SAYS I OWE SCHL WORK 2	70	0.0061	0.0671	0.0505	0.0095	0.0369	0.1210	-0.1442	-0.1952	-0.1428	0.1191	0.1623	
SELF-ESTEEM	1	71	0.2012	0.2465	0.2265	0.2192	0.2165	0.2458	-0.2007	-0.1721	-0.1316	0.4135	0.2771
SELF-ESTEEM	2	72	0.1353	0.1763	0.1507	0.1336	0.1934	0.2157	-0.2094	-0.2248	-0.1939	0.2959	0.3428

*** OUTPUT CORRELATION MATRIX ***

		VAR	45	46	47	48	49	50	51	52	53	54	55
SELF-ESTEEM	3	73	0.1245	0.1471	0.1467	0.1215	0.1637	0.2004	-0.1931	-0.1724	-0.2170	0.2274	0.2674
SELF-ESTEEM	4	74	0.1015	0.1352	0.1163	0.0954	0.1421	0.1590	-0.1842	-0.1315	-0.1547	0.2159	0.2446
SELF-ESTEEM	5	75	0.1190	0.1443	0.1089	0.1025	0.1066	0.1592	-0.1456	-0.1608	-0.1102	0.1562	0.1640
NEED SOCIAL APPROVAL	1	76	0.0379	0.0067	-0.0169	0.0342	0.0304	0.0274	-0.2859	-0.2490	-0.1878	0.2698	0.2124
TEST ANXIETY	1	77	-0.1120	-0.1369	-0.1282	-0.1067	-0.1198	-0.1334	0.0649	0.0278	0.0398	-0.0474	-0.0321
TEST ANXIETY	2	78	-0.0576	-0.0875	-0.1109	-0.0660	-0.0799	-0.1261	0.0760	0.0648	0.0443	-0.0121	-0.0326
NEED SELF-DEVELOPMENT	1	79	0.2249	0.2337	0.2227	0.2238	0.2627	0.2468	-0.2497	-0.1695	-0.1433	0.4577	0.3358
NEED SELF-DEVELOPMENT	2	80	0.2021	0.2450	0.1995	0.1792	0.2126	0.2361	-0.1667	-0.2011	-0.1373	0.3369	0.4579
NEED SELF-DEVELOPMENT	3	81	0.1339	0.1554	0.1625	0.1204	0.1860	0.1934	-0.1420	-0.1705	-0.2150	0.2751	0.3564
NEED SELF-DEVELOPMENT	4	82	0.0727	0.0935	0.0804	0.1020	0.1241	0.1299	-0.1194	-0.1252	-0.1459	0.2447	0.3067
NEED SELF-UTILIZATION	1	83	0.1744	0.1950	0.1607	0.1885	0.1803	0.2009	-0.1147	-0.0923	-0.0692	0.3478	0.2284
NEED SELF-UTILIZATION	2	84	0.1572	0.1915	0.1585	0.1584	0.1585	0.1908	-0.1080	-0.1037	-0.0789	0.2193	0.3612
NEED SELF-UTILIZATION	3	85	0.1205	0.1491	0.1314	0.1262	0.1671	0.1760	-0.1077	-0.1347	-0.1579	0.2074	0.2952
NEED SELF-UTILIZATION	4	86	0.0547	0.0732	0.0734	0.1033	0.1117	0.0851	-0.0894	-0.0882	-0.1198	0.1657	0.2394
HAPPINESS	1	87	0.0352	0.0569	0.0632	0.0828	0.0880	0.1325	-0.3251	-0.2274	-0.1905	0.4143	0.2657
HAPPINESS	2	88	-0.0161	0.0278	0.0227	0.0404	0.0960	0.1070	-0.2468	-0.3197	-0.2558	0.3279	0.3850
HAPPINESS	3	89	0.0094	-0.0193	0.0120	0.0183	0.0638	0.0898	-0.2267	-0.2568	-0.2845	0.2300	0.2656
HAPPINESS	4	90	-0.0192	-0.0069	0.0153	-0.0049	0.0159	0.0447	-0.2091	-0.1939	-0.2206	0.2015	0.2254
NEGATIVE AFFECT STATES	1	91	-0.0768	-0.1059	-0.1048	-0.1254	-0.0974	-0.1652	0.2563	0.1782	0.0999	-0.2743	-0.1839
NEGATIVE AFFECT STATES	2	92	-0.0129	-0.0472	-0.0310	-0.0329	-0.0823	-0.0986	0.2177	0.2610	0.1935	-0.2290	-0.2513
NEGATIVE AFFECT STATES	3	93	-0.0720	-0.0730	-0.0622	-0.0438	-0.0772	-0.1278	0.1872	0.1789	0.1991	-0.1498	-0.1861
NEGATIVE AFFECT STATES	4	94	-0.0813	-0.0821	-0.0927	-0.0402	-0.0748	-0.0969	0.1717	0.1557	0.1625	-0.1310	-0.1514
SOMATIC SYMPTOMS	1	95	-0.1719	-0.1944	-0.1738	-0.1960	-0.1258	-0.2256	0.1310	0.0851	0.0616	-0.2348	-0.1669
SOMATIC SYMPTOMS	2	96	-0.1913	-0.1563	-0.1346	-0.1331	-0.1362	-0.1963	0.1608	0.1717	0.0955	-0.1941	-0.2606
SOMATIC SYMPTOMS	3	97	-0.1093	-0.1415	-0.1252	-0.1021	-0.1272	-0.1781	0.1390	0.1284	0.1376	-0.1463	-0.1796
SOMATIC SYMPTOMS	4	98	-0.1351	-0.1458	-0.1401	-0.1157	-0.1375	-0.1757	0.1277	0.1306	0.1250	-0.1151	-0.1510
IMPULSE TO AGGRESSION	1	99	-0.1000	-0.0937	-0.0823	-0.1285	-0.1136	-0.1677	0.3260	0.2484	0.1650	-0.3561	-0.2723

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*** OUTPUT CORRELATION MATRIX ***

		VAR	45	46	47	48	49	50	51	52	53	54	55
IMPULSE TO AGGRESSION	2	100	-0.0127	-0.0290	0.0069	0.0021	-0.0479	-0.0855	0.1993	0.2920	0.2295	-0.2582	-0.3309
IMPULSE TO AGGRESSION	3	101	-0.0013	-0.0030	0.0091	0.0537	-0.0103	-0.0435	0.1838	0.2248	0.2272	-0.1268	-0.2041
IMPULSE TO AGGRESSION	4	102	0.0121	0.0272	0.0297	0.0277	0.0035	0.0104	0.1268	0.1757	0.1703	-0.0940	-0.1468
SOCIAL VALUES CLUSTER	1	103	0.1742	0.1630	0.1240	0.2161	0.1421	0.2067	-0.2124	-0.1450	-0.1146	0.4687	0.3031
SOCIAL VALUES CLUSTER	2	104	0.0850	0.1196	0.0732	0.1031	0.1231	0.1530	-0.1597	-0.2293	-0.1535	0.2845	0.4583
SOCIAL VALUES CLUSTER	3	105	0.0111	0.0262	0.0146	0.0240	0.0563	0.1155	-0.1345	-0.1682	-0.2124	0.2266	0.2962
SOCIAL VALUES CLUSTER	4	106	-0.0355	-0.0294	-0.0100	0.0101	0.0139	0.0495	-0.1131	-0.1478	-0.1719	0.2244	0.3063
INTERNAL CONTROL	1	107	0.2150	0.2338	0.2083	0.2048	0.1544	0.2097	-0.1894	-0.0968	-0.0896	0.2712	0.2146
INTERNAL CONTROL	2	108	0.1785	0.1840	0.1487	0.1363	0.1630	0.1870	-0.1410	-0.1607	-0.1266	0.1997	0.3101
INTERNAL CONTROL	3	109	0.1343	0.1330	0.0840	0.0801	0.0930	0.1357	-0.1322	-0.1431	-0.1705	0.1505	0.2021
INTERNAL CONTROL	4	110	0.0830	0.0767	0.0590	0.0445	0.0376	0.0849	-0.1280	-0.1114	-0.1539	0.1675	0.1725
TRUST IN PEOPLE	1	111	0.0524	0.0171	0.0256	0.0542	0.0292	0.0540	-0.1553	-0.1263	-0.0832	0.1423	0.1424
TRUST IN PEOPLE	2	112	-0.0384	0.0118	0.0117	-0.0051	0.0229	0.0533	-0.1266	-0.1893	-0.1221	0.1178	0.1718
TRUST IN PEOPLE	3	113	0.0034	0.0271	0.0540	0.0468	0.0559	0.0996	-0.1382	-0.1729	-0.1844	0.1115	0.1475
TRUST IN PEOPLE	4	114	0.0444	0.0463	0.0553	0.0213	0.0508	0.0739	-0.0975	-0.1356	-0.1199	0.0906	0.1091
TRUST IN GOVERNMENT	1	115	0.1214	0.1048	0.1032	0.1400	0.1273	0.1457	-0.2061	-0.0960	-0.0922	0.2463	0.1690
TRUST IN GOVERNMENT	2	116	0.0081	0.0007	0.0350	0.0707	0.0693	0.0836	-0.1963	-0.2045	-0.1343	0.1726	0.2547
TRUST IN GOVERNMENT	3	117	-0.0137	-0.0115	0.0011	0.0340	0.0381	0.0773	-0.1278	-0.1766	-0.2009	0.1357	0.1660
TRUST IN GOVERNMENT	4	118	-0.0793	-0.1115	-0.1307	-0.0236	-0.0465	-0.0542	-0.1426	-0.1085	-0.1443	0.1489	0.1096
TRUST IN GOVERNMENT	5	119	-0.0648	-0.0690	-0.0796	-0.0127	-0.0286	-0.0437	-0.1142	-0.1119	-0.1001	0.0740	0.0669
INTEREST IN GOVERNMENT	1	120	0.1331	0.1281	0.1214	0.1133	0.1296	0.1280	-0.2472	-0.1437	-0.1109	0.2447	0.1786
INTEREST IN GOVERNMENT	2	121	0.1452	0.1632	0.1746	0.1307	0.1814	0.2233	-0.1130	-0.1522	-0.1060	0.2108	0.2361
INTEREST IN GOVERNMENT	3	122	0.1167	0.1483	0.1869	0.0840	0.1460	0.1750	-0.1281	-0.1468	-0.1802	0.1686	0.1916
INTEREST IN GOVERNMENT	4	123	0.1027	0.1521	0.1488	0.1323	0.1364	0.1297	-0.1042	-0.1163	-0.0765	0.1720	0.2005
INTEREST IN GOVERNMENT	5	124	0.1568	0.1884	0.2257	0.1629	0.1808	0.2198	-0.0744	-0.0734	-0.0976	0.1378	0.1793
GOVT SHLD END DISCRIM	3	125	0.1179	0.1531	0.1324	0.1573	0.1429	0.1592	-0.0292	-0.0119	-0.0296	0.0560	0.0674
GOVT SHLD END DISCRIM	4	126	0.1065	0.1163	0.1200	0.1376	0.1274	0.1343	-0.0372	-0.0213	-0.0108	0.0465	0.0859

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*** QUANTILE CORRELATION MATRIX ***

		VAR	45	46	47	48	49	50	51	52	53	54	55
GOVT SHLD BUD DISCRET	5	127	0.0177	0.0599	0.0414	0.0724	0.0948	0.0908	-0.0679	-0.2867	-0.0631	0.0671	0.0930
SOCIAL DISTANCE (RACE)	3	128	-0.0855	-0.1260	-0.1374	-0.0696	-0.1184	-0.1350	0.0561	0.0130	0.0341	-0.0402	-0.0769
SOCIAL DISTANCE (RACE)	4	129	-0.1225	-0.1641	-0.1759	-0.0950	-0.1422	-0.1911	0.0461	0.0178	0.0164	-0.0055	-0.0779
SOCIAL DISTANCE (RACE)	5	130	-0.0755	-0.1352	-0.0979	-0.1035	-0.1248	-0.1507	0.0971	0.0628	0.0619	-0.0612	-0.0761
PERCEIVED DISCRIMINATE	3	131	0.0626	0.0720	0.0531	0.0716	0.0837	0.0923	-0.0168	0.0251	0.0145	0.0416	0.0306
PERCEIVED DISCRIMINATE	4	132	0.0974	0.1567	0.1736	0.1219	0.1237	0.2144	-0.0112	0.0063	0.0126	0.0747	0.0702
PERCEIVED DISCRIMINATE	5	133	0.0959	0.1665	0.1552	0.1438	0.1065	0.1920	-0.0528	0.0094	0.0033	0.0790	0.0702
VIETNAM DISSENT	3	134	0.0949	0.1219	0.1254	0.0631	0.0785	0.0514	0.0766	0.1397	0.1251	-0.1140	-0.1280
VIETNAM DISSENT	4	135	0.1764	0.2204	0.2290	0.1183	0.1786	0.1799	0.0564	0.1063	0.1345	-0.0534	-0.0580
VIETNAM DISSENT	5	136	0.2263	0.2659	0.2521	0.2009	0.1815	0.2317	0.0791	0.1137	0.1124	-0.0311	-0.0219
PREF MORE MILITARY INFL	3	137	-0.1334	-0.1982	-0.2052	-0.1214	-0.1310	-0.1632	-0.0221	-0.0753	-0.0443	0.0269	0.0018
PREF MORE MILITARY INFL	5	138	-0.2538	-0.2693	-0.2734	-0.2113	-0.1856	-0.2674	-0.0426	-0.1229	-0.1274	0.0139	0.0035
ABORTION DISAPPROVAL	4	139	-0.1283	-0.2082	-0.2016	-0.1167	-0.1547	-0.1750	-0.0750	-0.0524	-0.1242	0.0309	0.0041
ABORTION DISAPPROVAL	5	140	-0.1571	-0.1742	-0.1928	-0.1340	-0.1239	-0.1581	-0.0544	-0.0301	-0.0583	-0.0058	-0.0060
POPULATION CONCERN	4	141	0.2093	0.1909	0.1786	0.1668	0.2199	0.2041	0.0366	0.0109	0.0428	0.0425	0.0300
POPULATION CONCERN	5	142	0.1438	0.1425	0.1401	0.0857	0.1449	0.1444	0.0600	0.0470	0.0135	0.0061	-0.0061
IDEAL NUMBER CHILDREN	4	143	-0.0451	-0.0333	0.0116	-0.0334	0.0036	0.0238	-0.0481	-0.0099	-0.0462	0.0356	0.0196
IDEAL NUMBER CHILDREN	5	144	-0.0462	-0.0399	-0.0239	-0.0151	-0.0569	-0.0214	-0.0519	-0.0495	-0.0559	0.0218	0.0215
JOB THAT PAYS OFF	1	145	0.1057	0.0938	0.0951	0.1122	0.0710	0.1111	-0.0965	-0.1015	-0.0794	0.3090	0.2278
JOB THAT PAYS OFF	2	146	0.0302	0.0423	-0.0001	0.0607	0.0725	0.0604	-0.0925	-0.1305	-0.0457	0.1919	0.3329
JOB THAT PAYS OFF	3	147	-0.0321	-0.0281	-0.0339	-0.0040	0.0365	0.0214	-0.0448	-0.1285	-0.1013	0.1360	0.2146
JOB THAT PAYS OFF	4	148	-0.0632	-0.0607	-0.0780	-0.0313	-0.0263	-0.0156	-0.0797	-0.1127	-0.0521	0.1443	0.1592
JOB THAT PAYS OFF	5	149	-0.0859	-0.0816	-0.1044	-0.0784	-0.0727	-0.0670	-0.1331	-0.1165	-0.1451	0.1444	0.1714
JOB THAT DOESNT BUG ME	1	150	-0.1532	-0.1951	-0.2035	-0.1294	-0.1297	-0.1767	0.1113	0.0402	0.0337	-0.1221	-0.1049
JOB THAT DOESNT BUG ME	2	151	-0.0829	-0.1201	-0.0974	-0.0641	-0.0208	-0.0954	0.0874	0.0453	0.1033	-0.0891	-0.1432
JOB THAT DOESNT BUG ME	3	152	-0.1050	-0.1204	-0.0877	-0.0784	-0.0787	-0.1221	0.0834	0.2684	0.1314	-0.0743	-0.1435
JOB THAT DOESNT BUG ME	4	153	-0.1807	-0.0696	-0.0980	-0.0640	-0.0792	-0.0679	0.0488	0.0381	0.0736	-0.0312	-0.1026

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*** OUTPUT CORRELATION MATRIX ***

	VAR	45	46	47	48	49	50	51	52	53	54	55
JOB THAT DOESN'T BURN 1	154	0.0291	0.0393	0.0291	0.0417	0.0158	0.0293	0.0476	0.0133	0.0538	-0.0738	-0.0660
AMBITIOUS JOB ATTITUDE 1	155	0.2026	0.2354	0.2363	0.1830	0.1601	0.2262	-0.1588	-0.0996	-0.0784	0.2951	0.2343
AMBITIOUS JOB ATTITUDE 2	156	0.1940	0.1408	0.0790	0.0982	0.0623	0.1233	-0.1378	-0.1206	-0.1228	0.1974	0.3329
AMBITIOUS JOB ATTITUDE 3	157	0.1689	0.0833	0.0526	0.0624	0.0862	0.1184	-0.0999	-0.1367	-0.1771	0.1464	0.2537
AMBITIOUS JOB ATTITUDE 4	158	0.0279	0.0190	0.0325	0.0333	0.0543	0.0472	-0.0947	-0.1106	-0.0990	0.1200	0.1924
AMBITIOUS JOB ATTITUDE 5	159	-0.0836	-0.0908	-0.0962	-0.0970	-0.0646	-0.0687	-0.1358	-0.0997	-0.1488	0.1188	0.1741
STATUS ASPIRED OCCUPAT 1	160	0.4273	0.4592	0.4211	0.5899	0.4151	0.4073	-0.0966	-0.0587	0.0263	0.2277	0.1593
STATUS ASPIRED OCCUPAT 2	161	0.4253	0.5242	0.4631	0.4548	0.4810	0.4956	-0.0709	-0.0538	0.0046	0.1960	0.2309
STATUS ASPIRED OCCUPAT 3	162	0.4241	0.4855	0.4900	0.3787	0.4218	0.5454	-0.0907	-0.0231	-0.0315	0.1985	0.1635
STATUS ASPIRED OCCUPAT 4	163	0.3907	0.4641	0.4358	0.3902	0.4031	0.5170	-0.0543	-0.0397	-0.0354	0.1853	0.2103
STATUS ASPIRED OCCUPAT 5	164	0.3841	0.3939	0.3589	0.3741	0.3442	0.4152	-0.0674	-0.0060	-0.0296	0.1269	0.1392
DELINQ BEHAV IN SCHOOL 1	165	-0.1666	-0.2090	-0.1734	-0.2078	-0.1841	-0.2650	0.2309	0.2186	0.0861	-0.3394	-0.2632
DELINQ BEHAV IN SCHOOL 2	166	-0.1742	-0.2436	-0.2292	-0.1879	-0.2526	-0.3298	0.1679	0.2116	0.0981	-0.2681	-0.3013
DELINQ BEHAV IN SCHOOL 3	167	-0.1461	-0.2011	-0.1886	-0.1323	-0.2124	-0.3377	0.1451	0.2089	0.1521	-0.1925	-0.2436
SERIOUSNESS OF DELINQ 1	168	-0.0737	-0.0506	-0.0703	-0.1041	-0.0752	-0.1350	0.1883	0.1798	0.0806	-0.2743	-0.2022
SERIOUSNESS OF DELINQ 2	169	-0.0883	-0.1325	-0.1347	-0.0705	-0.1129	-0.1758	0.1239	0.1546	0.0714	-0.1642	-0.2238
SERIOUSNESS OF DELINQ 3	170	-0.0912	-0.0954	-0.1085	-0.0403	-0.0964	-0.1715	0.0621	0.1263	0.0556	-0.1031	-0.1669
SERIOUSNESS OF DELINQ 4	171	-0.0836	-0.0699	-0.1064	-0.0411	-0.0657	-0.1333	0.0758	0.0862	0.0594	-0.0579	-0.0798
SERIOUSNESS OF DELINQ 5	172	-0.0787	-0.0679	-0.0899	-0.1037	-0.0426	-0.1177	0.0883	0.0712	0.0592	-0.1144	-0.0620
INTERPERSONAL AGGRESSION 1	173	-0.1361	-0.1520	-0.1290	-0.1743	-0.1388	-0.2329	0.2426	0.2140	0.0877	-0.3069	-0.2227
INTERPERSONAL AGGRESSION 2	174	-0.1340	-0.1820	-0.1745	-0.1200	-0.1475	-0.2174	0.0756	0.0811	0.0045	-0.1298	-0.1811
INTERPERSONAL AGGRESSION 3	175	-0.1631	-0.1977	-0.1784	-0.1261	-0.1554	-0.2411	0.0394	0.0878	0.0058	-0.1077	-0.1339
INTERPERSONAL AGGRESSION 4	176	-0.1504	-0.1764	-0.1590	-0.1070	-0.1363	-0.2478	0.0767	0.0737	0.0080	-0.0431	-0.0973
INTERPERSONAL AGGRESSION 5	177	-0.1161	-0.1107	-0.1215	-0.1414	-0.1106	-0.2003	0.0610	0.0127	0.0383	-0.0864	-0.0191
THEFT AND VANDALISM 1	178	-0.0312	-0.0197	-0.0234	-0.0597	-0.0321	-0.0887	0.2155	0.2188	0.1223	-0.2896	-0.2323
THEFT AND VANDALISM 2	179	-0.0660	-0.0916	-0.0972	-0.0445	-0.0888	-0.1520	0.1539	0.1801	0.1032	-0.1809	-0.2400
THEFT AND VANDALISM 3	180	-0.0542	-0.0531	-0.0656	-0.0052	-0.0797	-0.1392	0.0875	0.1452	0.0956	-0.1152	-0.1710

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*** OUTPUT CORRELATION MATRIX ***

		VAR	45	46	47	48	49	50	51	52	53	54	55
THEFT AND VANDALISM	4	181	-0.0498	-0.0385	-0.0660	-0.0220	-0.0414	-0.0978	0.0756	0.1157	0.0955	-0.0869	-0.0896
THEFT AND VANDALISM	5	182	-0.0666	-0.0594	-0.0732	-0.0886	-0.0239	-0.0885	0.0943	0.0736	0.0546	-0.1131	-0.0670
DAILY CIGARETTE USE=1	3	183	-0.1019	-0.1399	-0.1867	-0.1114	-0.1772	-0.2721	0.1134	0.1275	0.0987	-0.1626	-0.1645
DAILY CIGARETTE USE=1	4	184	-0.1013	-0.1357	-0.1500	-0.1117	-0.1692	-0.2460	0.1057	0.1058	0.0992	-0.1141	-0.1401
DAILY CIGARETTE USE=1	5	185	-0.1280	-0.1602	-0.1652	-0.1177	-0.1503	-0.2467	0.0867	0.0718	0.0621	-0.1113	-0.1132
ALCOHOL USE 1-6	3	186	-0.0839	-0.0692	-0.1165	-0.0433	-0.1278	-0.1750	0.0700	0.1214	0.1196	-0.0949	-0.1145
ALCOHOL USE 1-6	4	187	-0.0321	-0.0108	-0.0357	-0.0392	-0.0832	-0.1243	0.0937	0.1167	0.1225	-0.0666	-0.0931
ALCOHOL USE 1-6	5	188	-0.0148	0.0058	0.0242	-0.0350	-0.0741	-0.0838	0.0545	0.0549	0.1146	-0.0480	-0.0899
MARIJUANA USE 1-6	3	189	0.0239	-0.0197	-0.0038	0.0315	-0.0653	-0.0614	0.0509	0.1225	0.0927	-0.0841	-0.1196
MARIJUANA USE 1-6	4	190	0.0794	0.0737	0.0758	0.0974	0.1102	0.0072	0.0740	0.1410	0.1389	-0.0486	-0.1024
MARIJUANA USE 1-6	5	191	0.0550	0.0640	0.0514	0.0517	0.0296	-0.0280	0.0434	0.0861	0.1311	-0.0598	-0.0662
DRUG USE:AMPH,BAPB,LSO 3	192	-0.0261	-0.0315	-0.0518	0.0265	-0.0156	-0.1139	0.0418	0.1024	-0.0030	-0.0371	-0.0721	
DRUG USE:AMPH,BAPB,LSO 4	193	0.0033	0.0172	-0.0181	0.0278	0.0332	-0.0716	0.0860	0.1361	0.0867	-0.0288	-0.0840	
DRUG USE:AMPH,BAPB,LSO 5	194	0.0267	0.0276	0.0102	0.0094	-0.0279	-0.0727	0.0488	0.0623	0.0787	-0.0753	-0.0210	
SCHOOL MEAN S.E.L.	1	195	0.2032	0.2624	0.2247	0.1553	0.1804	0.2343	0.0759	0.1533	0.0948	-0.0730	-0.0530
SCHOOL MEAN QUICK TEST	1	196	0.1856	0.2187	0.1787	0.1166	0.1199	0.1823	0.1160	0.1463	0.1063	-0.0534	-0.0334
SCHOOL MEAN SAT9-J	1	197	0.1708	0.2382	0.2004	0.1233	0.1339	0.2070	0.1177	0.1374	0.1121	-0.0386	-0.0228
SCHOOL MEAN SAT9	1	198	0.1681	0.2159	0.1736	0.0977	0.1186	0.1890	0.1129	0.1226	0.0948	-0.0534	-0.0108
PARTICIPANT IN 1970=1	4	199	0.0871	0.0693	0.0316	0.0807	0.0969	0.0468	-0.0506	-0.0011	-0.0012	0.0991	0.0566

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*** OUTPUT CORRELATION MATRIX ***

		VAP	56	57	58	59	60	61	62	63	64	65	66
NEGATIVE SCH ATTITUDES 1	57	-0.2626											
NEGATIVE SCH ATTITUDES 2	58	-0.3547	0.5079										
NEGATIVE SCH ATTITUDES 3	59	-0.5218	0.4282	0.5640									
ACADEMIC ACHIEVEMENT VALUE 1	60	0.2739	-0.3923	-0.2539	-0.2165								
ACADEMIC ACHIEVEMENT VALUE 2	61	0.3304	-0.1861	-0.3050	-0.2374	0.4168							
ACADEMIC ACHIEVEMENT VALUE 3	62	0.4398	-0.1407	-0.2120	-0.3001	0.2357	0.4329						
SELF-CONCEPT SCHL ABIL 1	63	0.1876	-0.2780	-0.2286	-0.1871	0.2562	0.1123	-0.0148					
SELF-CONCEPT SCHL ABIL 2	64	0.1696	-0.2538	-0.2390	-0.2119	0.1740	0.1097	-0.0316	0.7243				
DOES BEST WORK IN SCHL 1	65	0.1827	-0.1642	-0.1016	-0.1505	0.1494	0.1254	0.0874	0.1327	0.0923			
DOES BEST WORK IN SCHL 2	66	0.2305	-0.0849	-0.1326	-0.1934	0.0808	0.1441	0.0823	0.1408	0.1979	0.3811		
WORKS HARDER THAN AVG 1	67	0.1361	-0.1582	-0.1375	-0.1253	0.1894	0.1159	0.0936	0.2331	0.1994	0.3686	0.3022	
WORKS HARDER THAN AVG 2	68	0.1459	-0.1089	-0.1874	-0.1943	0.1265	0.1612	0.0804	0.1537	0.1696	0.2763	0.4293	
SATIS W OWN SCHL WORK 1	69	0.1556	-0.1389	-0.1478	-0.1201	0.0760	0.0618	0.0032	0.2263	0.2166	0.4170	0.3390	
SATIS W OWN SCHL WORK 2	70	0.1683	-0.0968	-0.1316	-0.1535	0.0390	0.0286	-0.0081	0.1597	0.2221	0.2813	0.4900	
SELF-ESTEEM 1	71	0.2469	-0.3411	-0.2401	-0.2001	0.3074	0.1662	0.0889	0.3561	0.2887	0.2275	0.1339	
SELF-ESTEEM 2	72	0.2980	-0.2478	-0.2605	-0.2208	0.1954	0.2224	0.1190	0.2842	0.3242	0.1729	0.2008	
SELF-ESTEEM 3	73	0.3620	-0.2277	-0.2079	-0.2882	0.1594	0.1981	0.1850	0.2711	0.2857	0.0953	0.1307	
SELF-ESTEEM 4	74	0.2931	-0.2448	-0.2057	-0.2456	0.1393	0.1383	0.1775	0.2405	0.2520	0.0973	0.0416	
SELF-ESTEEM 5	75	0.1852	-0.1704	-0.1356	-0.1614	0.1015	0.0886	0.0670	0.1718	0.1814	0.0711	0.0522	
NEED SOCIAL APPROVAL 1	76	0.1800	-0.2069	-0.1815	-0.1518	0.1368	0.1363	0.0989	-0.0084	-0.0449	0.2156	0.1795	
TEST ANXIETY 1	77	-0.0377	0.2178	0.1523	0.1530	-0.0063	0.0044	0.0513	-0.2078	-0.2121	-0.0610	-0.0431	
TEST ANXIETY 2	78	-0.0461	0.1561	0.1732	0.1362	0.0080	0.0145	0.0460	-0.1818	-0.2104	-0.0325	-0.0512	
NEED SELF-DEVELOPMENT 1	79	0.2758	-0.2629	-0.1905	-0.1747	0.3989	0.2457	0.1400	0.3246	0.2925	0.1644	0.1142	
NEED SELF-DEVELOPMENT 2	80	0.3159	-0.2264	-0.2402	-0.1898	0.2788	0.3592	0.1450	0.2964	0.3263	0.0994	0.1438	
NEED SELF-DEVELOPMENT 3	81	0.4269	-0.1911	-0.2111	-0.2530	0.2379	0.2878	0.3201	0.2603	0.2514	0.1101	0.1055	
NEED SELF-DEVELOPMENT 4	82	0.3420	-0.1622	-0.1797	-0.1872	0.2111	0.2356	0.2301	0.2068	0.2021	0.0546	0.0488	
NEED SELF-UTILIZATION 1	83	0.1741	-0.1913	-0.1425	-0.0954	0.3661	0.1943	0.0940	0.2520	0.2358	0.0611	0.0506	

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*** OUTPUT CORRELATION MATRIX ***

		VAR	56	57	58	59	60	61	62	63	64	65	66
NEED SELF-UTILIZATION	2	84	0.2350	-0.1335	-0.1864	-0.1285	0.2259	0.2993	0.1169	0.2400	0.2571	0.0476	0.0368
NEED SELF-UTILIZATION	3	85	0.3740	-0.1514	0.1910	-0.1962	0.2382	0.2733	0.3071	0.1930	0.1839	0.0661	0.0569
NEED SELF-UTILIZATION	4	86	0.2973	-0.1033	-0.1081	-0.1325	0.1921	0.2032	0.2131	0.1431	0.1360	0.0745	0.0156
HAPPINESS	1	87	0.2636	-0.2544	-0.2071	-0.2212	0.2555	0.1533	0.1467	0.1307	0.0692	0.1948	0.1108
HAPPINESS	2	88	0.3213	-0.2072	-0.2558	-0.2275	0.1646	0.2240	0.1426	0.1146	0.1133	0.1513	0.1581
HAPPINESS	3	89	0.3656	-0.1732	-0.1829	-0.2701	0.1297	0.1767	0.2484	0.0832	0.0547	0.1127	0.0981
HAPPINESS	4	90	0.2667	-0.1806	-0.1575	-0.1929	0.1029	0.1365	0.1790	0.0527	0.0516	0.0834	0.0669
NEGATIVE AFFECT STATES	1	91	-0.1502	0.3899	0.2547	0.2315	-0.1437	-0.0725	-0.0511	-0.1267	-0.0880	-0.1724	-0.1017
NEGATIVE AFFECT STATES	2	92	-0.2224	0.2701	0.3213	0.2552	-0.1012	-0.1179	-0.1024	-0.0867	-0.0841	-0.1560	-0.1424
NEGATIVE AFFECT STATES	3	93	-0.2414	0.2478	0.2546	0.3109	-0.0757	-0.0879	-0.0956	-0.1116	-0.1193	-0.0929	-0.0804
NEGATIVE AFFECT STATES	4	94	-0.1777	0.2427	0.2399	0.2161	-0.0601	-0.0685	-0.0982	-0.1078	-0.1142	-0.0715	-0.0420
SOMATIC SYMPTOMS	1	95	-0.1375	0.3857	0.2591	0.2520	-0.2059	-0.1038	-0.0421	-0.1911	-0.1250	-0.0742	-0.0231
SOMATIC SYMPTOMS	2	96	-0.1754	0.3031	0.3370	0.2603	-0.1233	-0.1349	-0.1050	-0.1641	-0.1416	-0.0991	-0.1162
SOMATIC SYMPTOMS	3	97	-0.2278	0.2423	0.2295	0.2903	-0.1111	-0.1012	-0.1323	-0.1328	-0.1132	-0.0734	-0.0724
SOMATIC SYMPTOMS	4	98	-0.1866	0.2508	0.2357	0.2088	-0.1125	-0.1053	-0.1209	-0.1573	-0.1044	-0.0849	-0.0404
IMPULSE TO AGGRESSION	1	99	-0.2634	0.3936	0.2516	0.2608	-0.2597	-0.1798	-0.1398	-0.1128	-0.0561	-0.2006	-0.1856
IMPULSE TO AGGRESSION	2	100	-0.2949	0.2194	0.3225	0.2841	-0.1765	-0.2396	-0.2043	-0.0195	0.0031	-0.1717	-0.1942
IMPULSE TO AGGRESSION	3	101	-0.2533	0.1513	0.1896	0.2952	-0.0785	-0.1642	-0.2058	0.0263	0.0101	-0.1035	-0.1182
IMPULSE TO AGGRESSION	4	102	-0.1782	0.1183	0.1552	0.1607	-0.0744	-0.1355	-0.1661	0.0235	0.0348	-0.0945	-0.0600
SOCIAL VALUES CLUSTER	1	103	0.2853	-0.4042	-0.2756	-0.2451	0.7246	0.3299	0.1888	0.2410	0.1766	0.0965	0.0880
SOCIAL VALUES CLUSTER	2	104	0.3329	-0.2524	-0.3395	-0.2593	0.3585	0.6249	0.3116	0.1644	0.1628	0.0763	0.1064
SOCIAL VALUES CLUSTER	3	105	0.4294	-0.2050	-0.2667	-0.3153	0.2373	0.3480	0.5923	0.0814	0.0635	0.0374	0.0695
SOCIAL VALUES CLUSTER	4	106	0.3243	-0.1857	-0.2223	-0.2176	0.2070	0.3093	0.3681	0.0771	0.0458	0.0310	0.0542
INTERNAL CONTROL	1	107	0.1451	-0.3858	-0.2349	-0.2562	0.2923	0.1217	0.0727	0.2484	0.2352	0.0810	0.0763
INTERNAL CONTROL	2	108	0.2252	-0.2898	-0.3738	-0.2847	0.1894	0.2071	0.1047	0.1985	0.2072	0.0532	0.0703
INTERNAL CONTROL	3	109	0.2355	-0.2121	-0.2692	-0.3384	0.1414	0.1729	0.1728	-0.1643	0.1452	0.0231	0.0196
INTERNAL CONTROL	4	110	0.2267	-0.2199	-0.2355	-0.2580	0.1452	0.1737	0.1527	0.1282	0.1044	-0.0131	-0.0074

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*** OUTPUT CORRELATION MATRIX ***

	VAR	56	57	58	59	60	61	62	63	64	65	66
TRUST IN PEOPLE	1 111	0.1312	-0.1424	-0.1118	-0.1266	0.0793	0.0328	-0.0082	-0.0066	0.0171	0.0455	0.0793
TRUST IN PEOPLE	2 112	0.1775	-0.0845	-0.1340	-0.1483	0.0465	0.0781	0.0593	0.0154	0.0257	0.0162	0.1092
TRUST IN PEOPLE	3 113	0.1933	-0.1179	-0.1474	-0.2036	0.0625	0.0591	0.0615	0.0564	0.0589	0.0183	0.0918
TRUST IN PEOPLE	4 114	0.1404	-0.1055	-0.1376	-0.1597	0.0796	0.0558	0.0692	0.0259	0.0281	0.0161	0.0818
TRUST IN GOVERNMENT	1 115	0.1972	-0.3136	-0.2411	-0.2182	0.1933	0.1405	0.0951	0.0558	0.0979	0.0638	0.0785
TRUST IN GOVERNMENT	2 116	0.2462	-0.2167	-0.2641	-0.2629	0.1549	0.1909	0.1583	0.0379	0.0422	0.0809	0.0786
TRUST IN GOVERNMENT	3 117	0.2924	-0.1972	-0.1683	-0.3066	0.0908	0.0999	0.1703	0.0503	0.0428	0.0551	0.0451
TRUST IN GOVERNMENT	4 118	0.1822	-0.0930	-0.0973	-0.1466	0.1251	0.1059	0.1801	-0.0893	-0.0381	0.0510	0.0314
TRUST IN GOVERNMENT	5 119	0.0965	-0.0661	-0.0663	-0.1061	0.0573	0.0771	0.0909	-0.0631	-0.0702	0.0388	0.0100
INTEREST IN GOVERNMENT	1 120	0.1794	-0.1082	-0.0623	-0.0750	0.1689	0.1275	0.0430	0.2385	0.2180	0.1013	0.0734
INTEREST IN GOVERNMENT	2 121	0.1760	-0.1420	-0.1118	-0.1172	0.1779	0.1569	0.0632	0.2559	0.2936	0.0694	0.0690
INTEREST IN GOVERNMENT	3 122	0.2493	-0.1349	-0.0736	-0.1455	0.1454	0.0936	0.0589	0.2554	0.2982	0.0888	0.0950
INTEREST IN GOVERNMENT	4 123	0.1845	-0.1127	-0.0932	-0.1016	0.1429	0.1494	0.0688	0.2530	0.2948	0.0475	0.0582
INTEREST IN GOVERNMENT	5 124	0.1735	-0.1638	-0.1150	-0.1368	0.1381	0.0806	0.0171	0.2718	0.3002	0.0476	0.0499
GOVT SHLD END DISCRIM	3 125	0.1442	-0.1367	-0.1808	-0.2136	0.0891	0.0876	0.0987	0.1853	0.2045	0.0363	0.0333
GOVT SHLD END DISCRIM	4 126	0.1171	-0.1465	-0.1821	-0.1910	0.0875	0.1340	0.0996	0.1914	0.1923	0.0055	0.0447
GOVT SHLD END DISCRIM	5 127	0.1144	-0.0950	-0.0860	-0.1369	0.0716	0.1009	0.1216	0.0627	0.0910	0.0816	0.0333
SOCIAL DISTANCE (RACE)	3 128	-0.0782	0.1372	0.1686	0.1977	-0.0840	-0.0541	-0.0864	-0.1405	-0.1407	-0.0332	-0.0013
SOCIAL DISTANCE (RACE)	4 129	-0.0565	0.1616	0.1996	0.1946	-0.0415	-0.0480	-0.0570	-0.1653	-0.1636	-0.0038	-0.0084
SOCIAL DISTANCE (RACE)	5 130	-0.0731	0.1236	0.1184	0.1556	-0.0418	-0.0260	-0.0469	-0.0952	-0.1379	-0.0349	-0.0306
PERCEIVED DISCRIMINATN	3 131	0.0078	-0.0801	-0.0407	-0.0245	0.0637	0.0490	0.0120	0.1387	0.1489	0.0256	0.0487
PERCEIVED DISCRIMINATN	4 132	0.0449	-0.1014	-0.0787	-0.1336	0.0663	0.0609	0.0010	0.2092	0.2143	0.0532	0.0559
PERCEIVED DISCRIMINATN	5 133	0.0792	-0.1443	-0.1151	-0.1620	0.0893	0.0461	0.0178	0.1892	0.2079	0.0408	0.0326
VIETNAM DISSIDENT	3 134	-0.1712	0.0559	0.0634	0.1067	-0.0686	-0.1137	-0.1817	0.0621	0.0751	-0.0063	-0.0045
VIETNAM DISSIDENT	4 135	-0.1380	-0.0226	-0.0288	0.0179	-0.0173	-0.0471	-0.1772	0.1978	0.2239	0.0138	0.0255
VIETNAM DISSIDENT	5 136	-0.0667	-0.0779	-0.0595	-0.0444	0.0163	-0.0451	-0.0968	0.2311	0.2482	-0.0107	-0.0298
PREP FOR MILITARY INFL	3 137	0.0473	0.0302	0.0161	-0.0132	-0.0112	0.0259	0.1271	-0.1582	-0.1831	-0.0280	-0.0478

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*** OUTPUT CORRELATION MATRIX ***

		VAR	56	57	58	59	60	61	62	63	64	65	66
DEEP MORE MILITARY INFL	5	138	0.0524	0.1273	0.1147	0.0621	-0.0443	0.0340	0.1412	-0.2564	-0.2696	0.0234	0.0190
ABORTION DISAPPROVAL	4	139	0.0739	0.0506	0.0209	-0.0368	0.0032	0.0855	0.1243	-0.1781	-0.2029	0.0420	0.0574
ABORTION DISAPPROVAL	5	140	0.0041	0.0415	0.0073	0.0317	-0.0403	0.0181	0.0387	-0.1422	-0.1609	0.0276	-0.0158
POPULATION CONCERN	4	141	0.1127	-0.1203	-0.1299	-0.0897	0.0527	0.0433	-0.0368	0.2161	0.2217	-0.0305	-0.0274
POPULATION CONCERN	5	142	0.0350	-0.0831	-0.0454	-0.0691	0.0526	0.0022	-0.0504	0.1689	0.1657	-0.0552	-0.0385
IDEAL NUMBER CHILDREN	4	143	0.0539	0.0047	-0.0189	0.0021	0.0051	0.0201	0.0507	-0.0793	-0.0587	0.0351	0.0101
IDEAL NUMBER CHILDREN	5	144	-0.0070	0.0406	-0.0169	-0.0016	0.0055	-0.0185	0.0027	-0.0532	-0.0678	0.0538	0.0582
JOB THAT PAYS OFF	1	145	0.2045	-0.2204	-0.1539	-0.1192	0.3963	0.1962	0.1598	0.1621	0.0892	0.0612	0.0024
JOB THAT PAYS OFF	2	146	0.2172	-0.1146	-0.1206	-0.0635	0.1818	0.3141	0.1882	0.1141	0.0644	0.0228	0.0229
JOB THAT PAYS OFF	3	147	0.3724	-0.0793	-0.0706	-0.1028	0.1245	0.1775	0.3157	0.0488	0.0019	0.0319	0.0130
JOB THAT PAYS OFF	4	148	0.2485	-0.0360	-0.0412	-0.0450	0.1344	0.1632	0.2516	0.0155	-0.0508	0.0487	0.0060
JOB THAT PAYS OFF	5	149	0.1999	0.0216	0.0226	-0.0176	0.0605	0.1530	0.1813	-0.0672	-0.0886	0.0512	0.0631
JOB THAT DOESNT BUG ME	1	151	-0.0330	0.3325	0.2848	0.2337	-0.1188	-0.0438	0.0134	-0.1568	-0.2049	-0.0036	-0.0308
JOB THAT DOESNT BUG ME	2	151	-0.0604	0.2373	0.3405	0.2441	-0.0780	-0.0541	-0.0071	-0.0996	-0.1283	-0.0253	-0.0093
JOB THAT DOESNT BUG ME	3	152	-0.1405	0.2316	0.2873	0.3610	-0.1059	-0.0822	-0.0640	-0.1273	-0.1762	-0.0093	0.0143
JOB THAT DOESNT BUG ME	4	153	-0.0707	0.1904	0.2577	0.2793	-0.0150	-0.0407	-0.0316	-0.1017	-0.1467	0.0181	0.0444
JOB THAT DOESNT BUG ME	5	154	0.0236	0.0899	0.0981	0.1419	-0.0135	-0.0262	-0.0633	0.0465	0.0130	0.0301	0.0288
AMBITIOUS JOB ATTITUDE	1	155	0.1520	-0.4325	-0.3544	-0.2881	0.3383	0.1512	0.0796	0.2330	0.2360	0.0423	0.0288
AMBITIOUS JOB ATTITUDE	2	156	0.1852	-0.2880	-0.3383	-0.2651	0.1723	0.2318	0.1132	0.1552	0.1523	0.0367	0.0235
AMBITIOUS JOB ATTITUDE	3	157	0.3538	-0.2405	-0.2360	-0.3604	0.1577	0.1691	0.2390	0.1303	0.1395	0.0265	-0.0043
AMBITIOUS JOB ATTITUDE	4	158	0.2178	-0.1884	-0.2542	-0.2769	0.0895	0.1319	0.1732	0.0937	0.0518	0.0150	-0.0354
AMBITIOUS JOB ATTITUDE	5	159	0.1614	-0.0587	-0.0669	-0.1336	0.0375	0.1145	0.1691	-0.0953	-0.0786	0.0102	0.0213
STATUS ASPIRED OCCUPAT	1	160	0.0770	-0.3023	-0.2193	-0.1503	0.2326	0.0935	-0.0603	0.3726	0.3432	0.1060	0.0391
STATUS ASPIRED OCCUPAT	2	161	0.1290	-0.2994	-0.2823	-0.2185	0.1987	0.1271	-0.0198	0.4108	0.4172	0.0751	0.0769
STATUS ASPIRED OCCUPAT	3	162	0.1468	-0.2857	-0.2101	-0.2421	0.1638	0.0839	-0.0282	0.4184	0.4057	0.1240	0.0847
STATUS ASPIRED OCCUPAT	4	163	0.1733	-0.2798	-0.2524	-0.2615	0.1793	0.1274	-0.0143	0.3875	0.3820	0.0777	0.0789
STATUS ASPIRED OCCUPAT	5	164	0.1157	-0.2617	-0.2216	-0.2378	0.1726	0.1087	-0.0067	0.3577	0.3954	0.0930	0.0502

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*** OUTPUT CORRELATION MATRIX ***

		VAP	56	57	58	59	60	61	62	63	64	65	66
DELINQ BEHAV IN SCHOOL 1	165	-0.1790	0.1600	0.2629	0.2582	-0.3040	-0.1212	-0.0726	-0.1844	-0.1242	-0.2039	-0.1696	
DELINQ BEHAV IN SCHOOL 2	166	-0.2034	0.2900	0.3549	0.2822	-0.2054	-0.1727	-0.1179	-0.1700	-0.1486	-0.1495	-0.2306	
DELINQ BEHAV IN SCHOOL 3	167	-0.2442	0.2314	0.2839	0.3415	-0.1648	-0.1230	-0.1123	-0.1753	-0.1529	-0.1137	-0.2258	
SERIOUSNESS OF DELINQ 1	168	-0.1291	0.2768	0.2749	0.1546	-0.2476	-0.1238	-0.1091	-0.0983	0.0064	-0.1613	-0.1179	
SERIOUSNESS OF DELINQ 2	169	-0.1376	0.1747	0.2908	0.1609	-0.1289	-0.1702	-0.1080	-0.0906	-0.0775	-0.0833	-0.1543	
SERIOUSNESS OF DELINQ 3	170	-0.1467	0.1690	0.2190	0.2580	-0.0998	-0.0780	-0.1050	-0.1108	-0.0976	-0.0246	-0.1436	
SERIOUSNESS OF DELINQ 4	171	-0.1822	0.0975	0.1067	0.1339	-0.0679	-0.0569	-0.1084	-0.0748	-0.0380	-0.0918	-0.0882	
SERIOUSNESS OF DELINQ 5	172	-0.0697	0.1367	0.0945	0.1109	-0.1258	-0.0749	-0.0296	-0.0629	-0.0455	-0.0611	-0.0757	
INTERPERSONAL AGGRESSN 1	173	-0.1432	0.3578	0.2554	0.2107	-0.2872	-0.1278	-0.0945	-0.1635	-0.0869	-0.1967	-0.1577	
INTERPERSONAL AGGRESSN 2	174	-0.0795	0.2265	0.3138	0.1561	-0.1419	-0.1545	-0.0758	-0.1387	-0.1220	-0.0522	-0.0968	
INTERPERSONAL AGGRESSN 3	175	-0.0926	0.2346	0.2385	0.2296	-0.1173	-0.0618	-0.0720	-0.1553	-0.1339	-0.0283	-0.0687	
INTERPERSONAL AGGRESSN 4	176	-0.0591	0.1982	0.1538	0.1995	-0.0719	-0.0666	-0.0869	-0.1333	-0.1005	-0.0651	-0.0350	
INTERPERSONAL AGGRESSN 5	177	-0.0455	0.1861	0.0709	0.1054	-0.1167	-0.0744	-0.0247	-0.0972	-0.1165	-0.0629	-0.0543	
THEFT AND VANDALISM 1	178	-0.1664	0.2524	0.1865	0.1714	-0.2303	-0.1344	-0.1257	-0.0635	0.0285	-0.1732	-0.1437	
THEFT AND VANDALISM 2	179	-0.1623	0.1532	0.2815	0.1744	-0.1270	-0.1634	-0.1264	-0.0494	-0.0423	-0.1132	-0.1858	
THEFT AND VANDALISM 3	180	-0.1688	0.1390	0.2063	0.2567	-0.0940	-0.0974	-0.1337	-0.0746	-0.0543	-0.0447	-0.1576	
THEFT AND VANDALISM 4	181	-0.0929	0.0524	0.0957	0.1100	-0.0656	-0.0485	-0.1088	-0.0484	-0.0195	-0.1064	-0.1227	
THEFT AND VANDALISM 5	182	-0.0697	0.1217	0.0996	0.1072	-0.1297	-0.0656	-0.0402	-0.0575	-0.0316	-0.0652	-0.0807	
DAILY CIGARETTE USE=1	3 183	-0.1759	0.1584	0.1502	0.2059	-0.1188	-0.0741	-0.0610	-0.1418	-0.1398	-0.1392	-0.2002	
DAILY CIGARETTE USE=1	4 184	-0.1461	0.1357	0.1426	0.1963	-0.0944	-0.0786	-0.0551	-0.1106	-0.1024	-0.1401	-0.2065	
DAILY CIGARETTE USE=1	5 185	-0.1145	0.1276	0.1161	0.1584	-0.0864	-0.0483	-0.0052	-0.1163	-0.0826	-0.1195	-0.1784	
ALCOHOL USE 1-6	3 186	-0.1356	0.1015	0.0993	0.1725	-0.0739	-0.1017	-0.0795	-0.1052	-0.1363	-0.1427	-0.1730	
ALCOHOL USE 1-6	4 187	-0.1342	0.0948	0.0600	0.1321	-0.0477	-0.1061	-0.0700	-0.0505	-0.0503	-0.1077	-0.1344	
ALCOHOL USE 1-6	5 188	-0.1932	0.0997	0.0844	0.0714	-0.0391	-0.0719	-0.0465	-0.0171	-0.0404	-0.0307	-0.0603	
MARIJUANA USE 1-6	3 189	-0.1381	0.0660	0.0800	0.1158	-0.0968	-0.0542	-0.1166	0.0171	0.0477	-0.0740	-0.0944	
MARIJUANA USE 1-6	4 190	-0.1771	-0.0168	0.0861	0.0898	-0.0479	-0.0473	-0.1281	0.0938	0.1208	-0.0723	-0.1275	
MARIJUANA USE 1-6	5 191	-0.0942	0.1257	0.0243	0.0683	-0.0620	-0.0644	-0.0895	0.0618	0.0619	-0.0885	-0.1314	

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*** OUTPUT CORRELATION MATRIX ***

	VAR	56	57	58	59	60	61	62	63	64	65	66
DRUG USE:AMPH, BARB, LSD 2	192	-0.0542	0.0637	0.0051	0.0565	-0.0433	-0.0524	-0.1047	-0.0424	0.0128	-0.0702	-0.0684
DRUG USE:AMPH, BARB, LSD 4	193	-0.1158	0.0438	0.0434	0.0753	-0.0448	-0.0611	-0.1007	0.0042	0.0495	-0.0582	-0.1255
DRUG USE:AMPH, BARB, LSD 5	194	-0.0719	0.0065	0.0034	0.0840	-0.0586	-0.0279	-0.0820	0.0427	0.0660	-0.1002	-0.1163
SCHOOL MEAN S.E.L.	1 195	-0.1140	-0.0910	-0.0754	-0.0631	-0.0157	-0.0865	-0.1353	0.1313	0.1371	-0.0286	-0.0456
SCHOOL MEAN QUICK TEST 1	1 196	-0.0674	-0.1071	-0.0747	-0.0305	0.0219	-0.0680	-0.1188	0.1357	0.1507	-0.0787	-0.0519
SCHOOL MEAN GATE-B	1 197	-0.1026	-0.1489	-0.0959	-0.0519	0.0415	-0.0673	-0.0896	0.1562	0.1754	-0.0849	-0.0611
SCHOOL MEAN GATE-C	1 198	-0.0741	-0.1636	-0.1157	-0.0602	0.0373	-0.0771	-0.1119	0.1202	0.1343	-0.1002	-0.0736
PARTICIPANT IN 1970-1	4 199	0.0334	-0.1253	-0.0781	-0.0209	0.0995	0.0105	-0.0093	0.0872	0.0344	0.0840	0.0211

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*** OUTPUT CORRELATION MATRIX ***

		VAR	67	68	69	70	71	72	73	74	75	76	77
WORKS HARDER THAN AVG	2	64	0.3939										
SATIS W OWN SCHL WORK	1	69	0.2905	0.2625									
SATIS W OWN SCHL WORK	2	70	0.2128	0.3470	0.3998								
SELF-ESTEEM	1	71	0.1750	0.1213	0.2161	0.1053							
SELF-ESTEEM	2	72	0.1692	0.1400	0.1766	0.1968	0.5312						
SELF-ESTEEM	3	73	0.1147	0.0992	0.1249	0.1273	0.4760	0.6365					
SELF-ESTEEM	4	74	0.0977	0.0826	0.1212	0.1047	0.4174	0.5598	0.6494				
SELF-ESTEEM	5	75	0.0534	0.0546	0.0646	0.0499	0.2965	0.4020	0.4410	0.4938			
NEED SOCIAL APPROVAL	1	76	0.0860	0.1014	0.1304	0.0871	0.3031	0.2276	0.1761	0.1735	0.1214		
TEST ANXIETY	1	77	-0.0229	-0.0286	-0.1438	-0.0900	-0.2596	-0.2013	-0.2260	-0.2436	-0.1625	-0.2130	
TEST ANXIETY	2	78	0.0226	-0.0023	-0.0837	-0.1627	-0.1944	-0.2668	-0.2459	-0.2531	-0.1903	-0.1340	0.5782
NEED SELF-DEVELOPMENT	1	79	0.1678	0.1101	0.1160	0.0678	0.4434	0.3111	0.2745	0.2236	0.1452	0.1398	-0.0324
NEED SELF-DEVELOPMENT	2	80	0.1375	0.1534	0.1156	0.0996	0.3001	0.4509	0.3427	0.2774	0.2146	0.1118	-0.0380
NEED SELF-DEVELOPMENT	3	81	0.1288	0.1183	0.0795	0.0644	0.2797	0.3670	0.4481	0.3643	0.2342	0.1017	-0.0694
NEED SELF-DEVELOPMENT	4	82	0.1081	0.0552	0.0761	0.0185	0.2201	0.3239	0.3209	0.4416	0.2730	0.0692	-0.0461
NEED SELF-UTILIZATION	1	83	0.1217	0.0569	0.0484	0.0090	0.3493	0.2160	0.2138	0.1429	0.0916	0.0148	0.0065
NEED SELF-UTILIZATION	2	84	0.1158	0.1128	0.0694	0.0468	0.2079	0.3423	0.2360	0.1974	0.1589	0.0222	-0.0190
NEED SELF-UTILIZATION	3	85	0.1199	0.0852	0.0371	0.0031	0.2079	0.2871	0.3761	0.2878	0.1812	0.0449	-0.0238
NEED SELF-UTILIZATION	4	86	0.0859	0.0462	0.0236	-0.0143	0.1644	0.2283	0.2253	0.3578	0.1956	0.0056	0.0218
HAPPINESS	1	87	0.1363	0.1019	0.1959	0.1062	0.5673	0.3792	0.3394	0.3276	0.2183	0.3110	-0.1739
HAPPINESS	2	88	0.1225	0.1009	0.1703	0.1616	0.3715	0.5823	0.4399	0.4021	0.2811	0.2668	-0.1265
HAPPINESS	3	89	0.0984	0.0616	0.0994	0.1191	0.3107	0.4305	0.6078	0.4632	0.3017	0.1598	-0.1235
HAPPINESS	4	90	0.0626	0.0290	0.1032	0.1132	0.2079	0.3784	0.4430	0.6049	0.3315	0.1864	-0.1498
NEGATIVE AFFECT STATES	1	91	-0.0647	-0.0638	-0.1715	-0.1071	-0.5434	-0.3592	-0.3366	-0.3683	-0.2386	-0.4540	0.4421
NEGATIVE AFFECT STATES	2	92	-0.0804	-0.0795	-0.1302	-0.1738	-0.3645	-0.5433	-0.4419	-0.4158	-0.2731	-0.3655	0.3048
NEGATIVE AFFECT STATES	3	93	-0.0722	-0.0771	-0.1233	-0.1347	-0.3189	-0.4197	-0.5933	-0.4912	-0.3053	-0.2803	0.3280
NEGATIVE AFFECT STATES	4	94	-0.0329	-0.0511	-0.0828	-0.1295	-0.2810	-0.3656	-0.4316	-0.6042	-0.3344	-0.2732	0.3516

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*** OUTPUT CORRELATION MATRIX ***

		VAR	67	68	69	70	71	72	73	74	75	76	77
SOMATIC SYMPTOMS	1	95	-0.0626	-0.0669	-0.0701	-0.0735	-0.0857	-0.0292	-0.2869	-0.3017	-0.2029	-0.2894	0.3879
SOMATIC SYMPTOMS	2	96	-0.0515	-0.0890	.0886	-0.1411	-0.3032	-0.3728	-0.3299	-0.3302	-0.2615	-0.1805	0.2797
SOMATIC SYMPTOMS	3	97	-0.0269	-0.0781	-0.0554	-0.1216	-0.2523	-0.3230	-0.4311	-0.3954	-0.2468	-0.1888	0.2569
SOMATIC SYMPTOMS	4	98	-0.0402	-0.0664	-0.0850	-0.1208	-0.2413	-0.2983	-0.3257	-0.4459	-0.2730	-0.1615	0.2781
IMPULSE TO AGGRESSION	1	99	-0.1680	-0.1142	-0.1455	-0.1281	-0.3442	-0.2292	-0.1807	-0.1822	-0.1595	-0.4980	0.1859
IMPULSE TO AGGRESSION	2	100	-0.1255	-0.1335	-0.0902	-0.1322	-0.2380	-0.3613	-0.2999	-0.2695	-0.1571	-0.4097	0.1257
IMPULSE TO AGGRESSION	3	101	-0.0849	-0.1202	-0.0454	-0.0822	-0.1628	-0.2201	-0.3572	-0.2922	-0.1297	-0.3289	0.1009
IMPULSE TO AGGRESSION	4	102	-0.0324	-0.0239	-0.0437	-0.0713	-0.1312	-0.2058	-0.2266	-0.3863	-0.1641	-0.3153	0.1618
SOCIAL VALUES CLUSTER	1	103	0.1595	0.1136	0.0757	0.0741	0.2809	0.1837	0.1794	0.1628	0.1081	0.2028	-0.0701
SOCIAL VALUES CLUSTER	2	104	0.1054	0.1106	0.0823	0.0622	0.2130	0.2979	0.2412	0.2089	0.1458	0.1857	-0.0663
SOCIAL VALUES CLUSTER	3	105	0.0838	0.0709	0.0181	0.0531	0.1220	0.1924	0.2559	0.2436	0.0954	0.1389	-0.0575
SOCIAL VALUES CLUSTER	4	106	0.0718	0.1593	0.0201	0.0473	0.1277	0.1792	0.1859	0.2904	0.1192	0.1381	-0.0583
INTERNAL CONTROL	1	107	0.0940	0.0744	0.0952	0.0819	0.2513	0.1817	0.1672	0.1841	0.1408	0.1519	-0.2256
INTERNAL CONTROL	2	108	0.0171	0.0573	0.0553	0.0476	0.1926	0.2639	0.1769	0.2086	0.1624	0.1423	-0.1966
INTERNAL CONTROL	3	109	0.0300	0.0563	0.0514	0.0723	0.1827	0.2192	0.2659	0.2527	0.2166	0.1446	-0.1751
INTERNAL CONTROL	4	110	-0.0105	0.0194	0.0560	0.0645	0.1306	0.2047	0.2174	0.2959	0.2084	0.1069	-0.1539
TRUST IN PEOPLE	1	111	0.0136	0.0030	0.0552	0.0330	0.1130	0.0837	0.0567	0.0573	0.0348	0.1659	-0.0787
TRUST IN PEOPLE	2	112	-0.0166	0.0686	0.0749	0.1063	0.0775	0.1118	0.0246	0.0255	0.0391	0.1006	-0.0521
TRUST IN PEOPLE	3	113	0.0151	0.0686	0.0831	0.1134	0.0735	0.0911	0.1014	0.0654	0.0820	0.1229	-0.0623
TRUST IN PEOPLE 507	4	114	0.0175	0.0502	0.1018	0.0914	0.0550	0.0589	0.0592	0.1000	0.0985	0.0748	-0.0620
TRUST IN GOVERNMENT	1	115	0.0104	0.0143	0.0755	0.0434	0.2281	0.1886	0.1785	0.1744	0.0808	0.1688	-0.1376
TRUST IN GOVERNMENT	2	116	0.0236	0.0282	0.0514	0.0616	0.1403	0.1923	0.1548	0.1716	0.1105	0.1283	-0.0853
TRUST IN GOVERNMENT	3	117	-0.0213	0.0256	0.0178	0.0825	0.0953	0.1540	0.1911	0.2132	0.1648	0.0709	-0.0769
TRUST IN GOVERNMENT	4	118	-0.0120	0.0096	0.0079	0.0505	0.0694	0.1077	0.1020	0.1312	0.1023	0.1239	0.0195
TRUST IN GOVERNMENT	5	119	0.0153	-0.0005	0.0081	0.0180	0.0072	0.0502	0.0664	0.0878	0.1228	0.0601	0.0095
INTEREST IN GOVERNMENT	1	120	0.1288	0.0731	0.1015	0.0916	0.2034	0.1603	0.1510	0.0881	0.0361	0.1024	-0.0200
INTEREST IN GOVERNMENT	2	121	0.1060	0.0937	0.0696	0.0529	0.1741	0.2146	0.1753	0.1724	0.0955	0.0727	-0.0557

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*** OUTPUT CORRELATION MATRIX ***

		VAF	67	68	69	70	71	72	73	74	75	76	77
INTEREST IN GOVERNMENT	3	122	0.1343	0.1259	-0.1076	0.1180	0.1623	0.1690	0.1825	0.1514	0.1164	0.0608	-0.0922
INTEREST IN GOVERNMENT	4	123	0.0373	0.0469	0.0438	0.0621	0.1571	0.2123	0.1868	0.2182	0.1322	0.0321	-0.0273
INTEREST IN GOVERNMENT	5	124	0.0962	0.0795	0.0865	0.0559	0.1475	0.1665	0.1705	0.1888	0.1681	0.0131	-0.1040
GOVT SHLD END DISCRIM	3	125	0.0509	0.0577	0.0590	0.0495	0.1079	0.0942	0.1398	0.1380	0.0635	0.0590	-0.1294
GOVT SHLD END DISCRIM	4	126	0.0352	0.0714	-0.0009	0.0392	0.0633	0.0688	0.1030	0.1479	0.0650	0.0300	-0.1739
GOVT SHLD END DISCRIM	5	127	0.0236	0.0227	0.0074	0.0008	0.0419	0.0278	0.0468	0.0233	0.0592	0.0555	-0.0206
SOCIAL DISTANCE (RACE)	3	128	-0.0715	-0.0339	-0.0221	-0.0304	-0.0766	-0.0571	-0.1065	-0.1094	-0.0152	-0.0955	0.1557
SOCIAL DISTANCE (RACE)	4	129	-0.0524	-0.0458	-0.0285	-0.0293	-0.0572	-0.0449	-0.0574	-0.1177	-0.0260	-0.0506	0.1863
SOCIAL DISTANCE (RACE)	5	130	-0.0088	-0.0199	-0.0359	-0.0128	-0.0642	-0.0610	-0.0597	-0.0811	-0.0574	-0.0882	0.0942
PERCEIVED DISCRIMINATN	3	131	0.0820	0.0595	0.0426	0.0351	0.0362	-0.0108	0.0465	0.0556	-0.0308	-0.0282	-0.0674
PERCEIVED DISCRIMINATN	4	132	0.0737	0.0509	0.0670	0.0310	0.0776	0.0621	0.0710	0.0786	0.0489	-0.0228	-0.0870
PERCEIVED DISCRIMINATN	5	133	0.0579	0.0268	0.0389	0.0187	0.0799	0.0300	0.0633	0.0624	-0.0096	-0.0213	-0.1014
VIETNAM DISSENT	3	134	0.0235	0.0120	0.0151	0.0206	-0.0370	-0.0491	-0.0471	-0.0739	-0.0750	-0.0435	-0.0468
VIETNAM DISSENT	4	135	0.0842	0.0657	0.0948	0.0411	0.0305	-0.0056	-0.0105	-0.0532	-0.0343	-0.0965	-0.0801
VIETNAM DISSENT	5	136	0.0594	0.0081	0.0628	0.0197	0.0641	0.0228	0.0356	0.0124	-0.0121	-0.0931	-0.1281
PREP MORE MILITARY INFL	3	137	-0.0681	-0.0725	-0.0666	-0.0696	-0.0363	0.0076	-0.0002	0.0031	0.0776	0.0341	0.0636
PREP MORE MILITARY INFL	5	138	-0.0441	-0.0317	-0.0745	-0.0105	-0.1054	-0.0418	-0.0776	-0.0759	0.0138	0.0570	0.1480
ABORTION DISAPPROVAL	4	139	-0.0248	0.0064	-0.0293	0.0231	-0.0308	-0.0456	-0.0155	-0.0697	-0.0354	0.1035	0.0797
ABORTION DISAPPROVAL	5	140	-0.0166	-0.0305	-0.0197	-0.0331	-0.0609	-0.0442	-0.0596	-0.0447	-0.0405	0.0846	0.0689
POPULATION CONCERN	4	141	0.0543	0.0776	0.0402	0.0628	0.0606	0.1043	0.0690	0.0955	0.0024	-0.0925	-0.0705
POPULATION CONCERN	5	142	-0.0077	0.0224	0.0358	0.0339	0.0352	0.0228	0.0243	0.0261	0.0111	-0.0823	-0.0887
IDEAL NUMBER CHILDREN	4	143	0.0220	-0.0289	-0.0087	-0.0663	0.0809	-0.0274	0.0068	-0.0407	-0.0029	0.0666	0.0146
IDEAL NUMBER CHILDREN	5	144	0.0365	0.0035	-0.0191	-0.0441	0.0317	0.0350	0.0300	0.0217	0.0453	0.0369	0.0182
JOB THAT PAYS OFF	1	145	0.0992	0.0242	0.0483	-0.0187	0.2363	0.1836	0.1491	0.1477	0.0791	0.0459	-0.0031
JOB THAT PAYS OFF	2	146	0.0637	0.0674	0.0510	0.0026	0.1375	0.2371	0.1720	0.1821	0.1256	-0.0055	0.0261
JOB THAT PAYS OFF	3	147	0.0315	-0.0057	-0.0216	-0.0028	0.0991	0.1514	0.1972	0.1703	0.1112	0.0430	0.0371
JOB THAT PAYS OFF	4	148	0.0279	-0.0050	-0.0104	-0.0057	0.0789	0.0512	0.0976	0.1797	0.1206	0.0911	0.0729

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*** OUTPUT CORRELATION MATRIX ***

	VAR	67	68	69	70	71	72	73	74	75	76	77
JOB THAT PAYS OFF	5 149	0.0330	0.0531	-0.0207	-0.0300	0.0395	0.0445	0.0486	0.0755	0.1712	0.0614	0.1350
JOB THAT DOESNT BUG ME 1	150	-0.0119	-0.0454	-0.0720	-0.0676	-0.1449	-0.1346	-0.1119	-0.1129	-0.0741	-0.0772	0.1937
JOB THAT DOESNT BUG ME 2	151	-0.0167	-0.0096	-0.0504	-0.0263	-0.1148	-0.1778	-0.1635	-0.1352	-0.1121	-0.1009	0.1621
JOB THAT DOESNT BUG ME 3	152	-0.0496	-0.0588	-0.0546	-0.0761	-0.1066	-0.1930	-0.2348	-0.2216	-0.1226	-0.0647	0.1692
JOB THAT DOESNT BUG ME 4	153	-0.0018	-0.0240	-0.0436	-0.0462	-0.0619	-0.1764	-0.1539	-0.2426	-0.1064	-0.0451	0.1622
JOB THAT DOESNT BUG ME 5	154	-0.0162	0.0238	0.0388	0.0345	-0.0044	-0.0929	-0.0870	-0.1022	-0.1050	-0.0747	0.0468
AMBITIOUS JOB ATTITUDE 1	155	0.0700	0.0566	0.0934	0.0508	0.2687	0.2276	0.1868	0.1883	0.1049	0.0906	-0.1806
AMBITIOUS JOB ATTITUDE 2	156	0.0527	0.0504	0.0778	0.0257	0.1840	0.3010	0.2484	0.2315	0.1714	0.0837	-0.1350
AMBITIOUS JOB ATTITUDE 3	157	0.0582	0.0473	0.0368	0.0611	0.1451	0.2519	0.3130	0.2884	0.1637	0.0771	-0.1204
AMBITIOUS JOB ATTITUDE 4	158	0.0191	0.0184	0.0313	0.0378	0.1022	0.1849	0.1914	0.3244	0.1633	0.0900	-0.0983
AMBITIOUS JOB ATTITUDE 5	159	0.0365	0.0134	-0.0467	-0.0512	0.0182	0.1015	0.0992	0.1319	0.1886	0.1034	0.0480
STATUS ASPIRED OCCUPAT 1	160	0.1479	0.1133	0.1005	0.0246	0.1867	0.1270	0.0941	0.1137	0.1126	0.0178	-0.0989
STATUS ASPIRED OCCUPAT 2	161	0.1636	0.1423	0.1164	0.1219	0.1977	0.1501	0.1340	0.1191	0.0859	-0.0241	-0.1230
STATUS ASPIRED OCCUPAT 3	162	0.1654	0.1679	0.1263	0.0856	0.2089	0.1789	0.1600	0.1388	0.0768	-0.0101	-0.1453
STATUS ASPIRED OCCUPAT 4	163	0.1514	0.1805	0.1101	0.1107	0.2087	0.1748	0.1513	0.1414	0.0990	-0.0055	-0.1182
STATUS ASPIRED OCCUPAT 5	164	0.1526	0.1518	0.0790	0.0742	0.1529	0.1502	0.1219	0.1213	0.1122	-0.0161	-0.1104
DELINQ BEHAV IN SCHOOL 1	165	-0.2467	-0.1852	-0.1616	-0.1373	-0.1880	-0.1037	-0.0433	-0.0637	-0.0039	-0.2056	0.0361
DELINQ BEHAV IN SCHOOL 2	166	-0.2420	-0.2572	-0.1445	-0.1774	-0.1833	-0.1414	-0.1058	-0.0674	-0.0552	-0.1867	0.0696
DELINQ BEHAV IN SCHOOL 3	167	-0.1617	-0.2494	-0.1401	-0.1878	-0.1507	-0.1207	-0.1001	-0.0843	-0.0317	-0.1510	0.1333
SERIOUSNESS OF DELINQ 1	168	-0.1539	-0.1360	-0.0837	-0.0824	-0.1490	-0.0789	-0.0124	-0.0307	0.0208	-0.2521	0.0132
SERIOUSNESS OF DELINQ 2	169	-0.1335	-0.1599	-0.0839	-0.1098	-0.1370	-0.0992	-0.0506	-0.0334	-0.0406	-0.1600	0.0074
SERIOUSNESS OF DELINQ 3	170	-0.0705	-0.1698	-0.0308	-0.1147	-0.1100	-0.1088	-0.1098	-0.0822	-0.0128	-0.1106	0.0652
SERIOUSNESS OF DELINQ 4	171	-0.0920	-0.1396	-0.0127	-0.0688	-0.0628	-0.0418	-0.0482	-0.0353	-0.0160	-0.1261	0.0291
SERIOUSNESS OF DELINQ 5	172	-0.0468	-0.1064	-0.0159	-0.0745	-0.0404	-0.0340	-0.0309	-0.0147	-0.0849	-0.0950	0.0028
INTERPERSONAL AGGRESSN 1	173	-0.2116	-0.1578	-0.1334	-0.1420	-0.1523	-0.0993	-0.0183	-0.0422	-0.0077	-0.2425	0.0261
INTERPERSONAL AGGRESSN 2	174	-0.1440	-0.1135	-0.0843	-0.0944	-0.1262	-0.0938	-0.0693	-0.0477	-0.0455	-0.1011	0.0561
INTERPERSONAL AGGRESSN 3	175	-0.0810	-0.1123	-0.0525	-0.1028	-0.0904	-0.0825	-0.0826	-0.0814	-0.0256	-0.0795	0.1186

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*** OUTPUT CORRELATION MATRIX ***

		VA2	67	68	69	70	71	72	73	74	75	76	77
INTERPERSONAL AGGRESSION	4	176	-0.0822	-0.1162	-0.0623	-0.0836	-0.1027	-0.0418	-0.0490	-0.0633	-0.0111	-0.0564	0.1046
INTERPERSONAL AGGRESSION	5	177	-0.0899	-0.1211	.0586	-0.0789	-0.0783	-0.0375	-0.0518	-0.0327	-0.0579	-0.0486	0.0759
THEFT AND VANDALISM	1	178	-0.1441	-0.1391	-0.0814	-0.0702	-0.1607	-0.0705	-0.0265	-0.0320	0.0121	-0.2970	-0.0101
THEFT AND VANDALISM	2	179	-0.1316	-0.1713	-0.0702	-0.1111	-0.1351	-0.1038	-0.0568	-0.0450	-0.0436	-0.2026	-0.0202
THEFT AND VANDALISM	3	180	-0.0696	-0.1982	-0.0219	-0.1154	-0.1238	-0.1056	-0.1096	-0.0876	-0.0091	-0.1649	0.0547
THEFT AND VANDALISM	4	181	-0.1884	-0.1600	-0.0068	-0.0765	-0.0560	-0.0391	-0.0461	-0.0404	-0.0128	-0.1591	0.0061
THEFT AND VANDALISM	5	182	-0.0719	-0.0799	-0.0127	-0.0631	-0.0487	-0.0478	-0.0401	-0.0264	-0.0985	-0.1119	-0.0122
DAILY CIGARETTE USE=1	3	193	-0.1120	-0.1705	-0.1494	-0.1623	-0.1298	-0.0522	-0.0642	-0.0109	0.0200	-0.0634	0.0660
DAILY CIGARETTE USE=1	4	184	-0.1106	-0.1834	-0.1135	-0.1707	-0.0968	-0.0539	-0.0587	-0.0178	0.0065	-0.0844	0.0702
DAILY CIGARETTE USE=1	5	185	-0.1529	-0.1708	-0.1218	-0.1644	-0.1090	-0.0644	-0.0695	-0.0445	0.0085	-0.0492	0.0721
ALCOHOL USE 1-6	3	186	-0.1631	-0.1945	-0.1141	-0.1133	-0.0572	-0.0082	-0.0016	0.0038	0.0583	-0.0747	0.0537
ALCOHOL USE 1-6	4	187	-0.1000	-0.1544	-0.0847	-0.0645	-0.0298	-0.0132	-0.0151	-0.0183	0.0257	-0.0914	0.0607
ALCOHOL USE 1-6	5	188	-0.0780	-0.1179	-0.0404	-0.0503	-0.0015	-0.0261	-0.0074	-0.0173	0.0039	-0.0626	0.0257
MARIJUANA USE 1-6	3	189	-0.0491	-0.1000	-0.0553	-0.0689	0.0106	0.0134	0.0287	0.0472	0.0166	-0.0498	-0.0367
MARIJUANA USE 1-6	4	190	-0.0179	-0.0961	-0.0155	-0.0786	0.0205	0.0188	-0.0038	0.0202	0.0218	-0.0935	-0.0561
MARIJUANA USE 1-6	5	191	-0.0693	-0.1163	-0.0558	-0.0851	-0.0017	-0.0165	0.0113	0.0126	-0.0383	-0.1176	-0.0466
DRUG USE: AMPH, BARB, LSD	3	192	-0.0777	-0.0750	-0.0315	-0.0732	-0.0156	0.0285	0.0011	0.0214	-0.0182	-0.0273	-0.0319
DRUG USE: AMPH, BARB, LSD	4	193	-0.0641	-0.1096	-0.0274	-0.1063	-0.0315	-0.0174	-0.0417	-0.0196	-0.0362	-0.1003	-0.0301
DRUG USE: AMPH, BARB, LSD	5	194	-0.0985	-0.1481	-0.0460	-0.0862	-0.0288	-0.0158	-0.0112	-0.0079	-0.0538	-0.1204	-0.0377
SCHOOL MEAN S.T.L.	1	195	0.0593	0.0612	-0.0057	0.0121	0.0342	0.0071	0.0233	0.0516	0.0220	-0.1099	-0.0976
SCHOOL MEAN QUICK TEST	1	196	0.0329	0.0439	-0.0180	0.0039	0.0283	0.0384	0.0196	0.0436	0.0550	-0.1116	-0.0985
SCHOOL MEAN GATE-J	1	197	0.0457	0.0509	-0.0208	0.0023	0.0377	0.0203	0.0023	0.0398	0.0540	-0.1261	-0.0629
SCHOOL MEAN GATES	1	198	0.0241	0.0336	-0.0320	-0.0094	0.0268	0.0224	0.0018	0.0531	0.0330	-0.1330	-0.0930
PARTICIPANT IN 1970=1	4	199	0.1113	0.0376	0.0383	0.0372	0.0783	0.0231	0.0220	99.9999	-0.0118	0.0301	-0.0391

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*** OUTPUT CORRELATION MATRIX ***

		VAR	78	79	80	81	82	83	84	85	86	87	88
NEED SELF-DEVELOPMENT	1	78	-0.0250										
NEED SELF-DEVELOPMENT	2	80	-0.0123	0.5431									
NEED SELF-DEVELOPMENT	3	81	-0.0553	0.4740	0.6158								
NEED SELF-DEVELOPMENT	4	82	-0.0385	0.3876	0.5349	0.6413							
NEED SELF-UTILIZATION	1	83	-0.0145	0.7135	0.4242	0.3884	0.3150						
NEED SELF-UTILIZATION	2	84	-0.0150	0.4112	0.7291	0.4751	0.4354	0.4517					
NEED SELF-UTILIZATION	3	85	0.0157	0.3942	0.5106	0.7106	0.5346	0.4157	0.5326				
NEED SELF-UTILIZATION	4	86	0.0036	0.3035	0.4380	0.5378	0.7546	0.3350	0.4972	0.5902			
HAPPINESS	1	87	-0.1133	0.3369	0.1876	0.2030	0.1535	0.2708	0.1515	0.1889	0.1181		
HAPPINESS	2	88	-0.1757	0.2055	0.3255	0.2392	0.2156	0.1383	0.2595	0.2000	0.1468	0.5434	
HAPPINESS	3	89	-0.1722	0.1736	0.1808	0.3204	0.2497	0.0872	0.1212	0.2591	0.1580	0.4537	0.6053
HAPPINESS	4	90	-0.1959	0.1346	0.1516	0.2165	0.2952	0.0692	0.1105	0.1839	0.2505	0.4259	0.5355
NEGATIVE AFFECT STATES	1	91	0.3224	-0.3432	-0.0537	-0.1083	-0.0965	0.0578	0.0320	-0.0133	-0.0230	-0.5405	-0.3749
NEGATIVE AFFECT STATES	2	92	0.4189	-0.0597	-0.0466	-0.1136	-0.0875	0.0439	0.0668	-0.0341	0.0279	-0.3477	-0.5600
NEGATIVE AFFECT STATES	3	93	0.3980	-0.0786	-0.0548	-0.1024	-0.0780	0.0111	0.0264	-0.0033	0.0252	-0.3333	-0.4265
NEGATIVE AFFECT STATES	4	94	0.3923	-0.0764	-0.0439	-0.1069	-0.0972	0.0142	0.0366	-0.0126	0.0028	-0.3059	-0.3916
SOMATIC SYMPTOMS	1	95	0.3175	-0.1296	-0.1411	-0.1656	-0.1433	-0.0758	-0.0975	-0.0918	-0.0986	-0.3322	-0.2797
SOMATIC SYMPTOMS	2	96	0.4015	-0.0880	-0.0997	-0.1433	-0.1051	-0.0415	-0.0511	-0.0773	-0.0477	-0.2564	-0.3525
SOMATIC SYMPTOMS	3	97	0.3204	-0.0927	-0.0879	-0.1659	-0.1236	-0.0205	-0.0354	-0.1097	-0.0580	-0.2198	-0.2676
SOMATIC SYMPTOMS	4	98	0.3154	-0.0717	-0.0425	-0.1262	-0.1203	-0.0176	-0.0189	-0.0595	-0.0815	-0.2080	-0.2610
IMPULSE TO AGGRESSION	1	99	0.1415	-0.1593	-0.1291	-0.1329	-0.1050	-0.0581	-0.0557	-0.0865	-0.0326	-0.3377	-0.2372
IMPULSE TO AGGRESSION	2	100	0.1416	-0.1457	-0.1125	-0.1682	-0.1398	-0.0622	-0.0183	-0.1192	-0.0456	-0.2650	-0.4066
IMPULSE TO AGGRESSION	3	101	0.1651	-0.0625	-0.0552	-0.1125	-0.0916	0.0226	0.0303	-0.0404	-0.0123	-0.1951	-0.2509
IMPULSE TO AGGRESSION	4	102	0.1735	-0.0520	-0.0040	-0.0813	-0.1115	0.0418	0.0641	-0.0185	-0.0228	-0.1867	-0.2596
SOCIAL VALUES CLUSTER	1	103	-0.0312	0.4420	0.2859	0.2600	0.2419	0.3707	0.2523	0.2401	0.2163	0.2788	0.2026
SOCIAL VALUES CLUSTER	2	104	-0.0454	0.2704	0.4181	0.3346	0.3029	0.2594	0.3588	0.3202	0.2598	0.2200	0.3393
SOCIAL VALUES CLUSTER	3	105	-0.0605	0.1983	0.2343	0.4010	0.3127	0.1741	0.1855	0.3915	0.2771	0.1941	0.2103

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*** OUTPUT CORRELATION MATRIX ***

		V18	78	79	80	81	82	83	84	85	86	87	88
SOCIAL VALUES CLUSTER	4	106	-0.0349	0.1814	0.2368	0.3022	0.3929	0.1692	0.2062	0.2821	0.3766	0.1645	0.2488
INTERNAL CONTROL	1	107	-0.1563	0.2363	0.1830	0.1847	0.1620	0.1555	0.0951	0.0980	0.0815	0.2079	0.1199
INTERNAL CONTROL	2	108	-0.1979	0.1652	0.2275	0.2012	0.1817	0.1290	0.1571	0.1602	0.0947	0.1435	0.2061
INTERNAL CONTROL	3	109	-0.1873	0.1471	0.1530	0.2176	0.1602	0.0794	0.1164	0.1391	0.0910	0.1365	0.1856
INTERNAL CONTROL	4	110	-0.1777	0.1273	0.1480	0.1974	0.2555	0.0688	0.0945	0.1179	0.1716	0.1372	0.1876
TRUST IN PEOPLE	1	111	-0.0379	0.0756	0.0233	0.0189	0.0200	0.0157	-0.0149	-0.0012	-0.0173	0.1599	0.1341
TRUST IN PEOPLE	2	112	-0.0931	0.0550	0.0512	0.0401	0.0233	0.0173	0.0038	0.0354	-0.0043	0.1400	0.2321
TRUST IN PEOPLE	3	113	-0.1006	0.0602	0.0634	0.0636	0.0344	0.0139	0.0211	0.0095	0.0041	0.0847	0.2053
TRUST IN PEOPLE	4	114	-0.0721	0.0468	0.0168	0.0041	0.0416	0.0185	-0.0061	-0.0020	0.0135	0.0800	0.1705
TRUST IN GOVERNMENT	1	115	-0.1147	0.1677	0.1179	0.1385	0.1339	0.1561	0.1116	0.1205	0.0977	0.2338	0.2114
TRUST IN GOVERNMENT	2	116	-0.1123	0.1139	0.1508	0.1545	0.1415	0.0644	0.1046	0.1226	0.1333	0.1927	0.2435
TRUST IN GOVERNMENT	3	117	-0.1193	0.1173	0.1203	0.1678	0.1706	0.0562	0.0909	0.1534	0.1359	0.1503	0.1966
TRUST IN GOVERNMENT	4	118	-0.0397	0.0970	0.0734	0.1164	0.2049	0.0559	0.0637	0.1096	0.1631	0.1937	0.2280
TRUST IN GOVERNMENT	5	119	-0.0241	0.0594	0.0624	0.0709	0.1012	0.0220	0.0258	0.0745	0.0899	0.1032	0.1360
INTEREST IN GOVERNMENT	1	120	-0.0479	0.2727	0.1022	0.1700	0.0987	0.1898	0.1131	0.1241	0.1051	0.1527	0.0830
INTEREST IN GOVERNMENT	2	121	-0.0466	0.2690	0.2892	0.2568	0.2043	0.1787	0.1783	0.1991	0.1510	0.1099	0.1399
INTEREST IN GOVERNMENT	3	122	-0.0625	0.1775	0.1786	0.2135	0.1728	0.1291	0.1245	0.1886	0.1281	0.1031	0.1440
INTEREST IN GOVERNMENT	4	123	-0.0305	0.2020	0.2242	0.2153	0.2389	0.1513	0.1754	0.1767	0.1981	0.0957	0.1307
INTEREST IN GOVERNMENT	5	124	-0.0649	0.1878	0.2002	0.1668	0.1604	0.1474	0.1651	0.1442	0.1698	0.0695	0.0954
GOVT SHLD END DISCRIM	3	125	-0.1267	0.1316	0.0908	0.1585	0.1040	0.0931	0.0934	0.1679	0.1117	0.0338	0.0393
GOVT SHLD END DISCRIM	4	126	-0.1159	0.0973	0.1198	0.1431	0.1266	0.0689	0.1086	0.1315	0.1529	0.0187	0.0238
GOVT SHLD END DISCRIM	5	127	-0.0199	0.0699	0.1016	0.0906	0.0623	0.0376	0.0963	0.0764	0.0782	0.0297	0.0480
SOCIAL DISTANCE (RACE)	3	128	0.1045	-0.0698	-0.0427	-0.0812	-0.0700	-0.0607	-0.0655	-0.1111	-0.0983	-0.0464	-0.0401
SOCIAL DISTANCE (RACE)	4	129	0.1465	-0.0256	-0.0497	-0.0560	-0.0723	-0.0221	-0.0524	-0.0712	-0.0697	-0.0072	-0.0092
SOCIAL DISTANCE (RACE)	5	130	0.0625	-0.0449	-0.0467	-0.0277	-0.0342	-0.0165	-0.0407	-0.0252	-0.0162	-0.0244	-0.0263
PERCEIVED DISCRIMINATN	3	131	-0.0131	0.0620	0.0382	0.0751	0.0462	0.1108	0.0450	0.0970	0.0823	0.0068	-0.0093
PERCEIVED DISCRIMINATN	4	132	-0.0614	0.1132	0.0557	0.0915	0.0587	0.0935	0.0715	0.0772	0.0600	0.0300	0.0324

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*** OUTPUT CORRELATION MATRIX ***

	VAR	79	79	80	81	82	83	84	85	86	87	88
PERCEIVED DISCRIMINATION	5 133	-0.0624	0.0811	0.0569	0.0762	0.0444	0.0577	0.0514	0.0944	0.0533	0.0229	0.0178
VIETNAM DISSENT	3 134	-0.0167	-0.0745	0.0746	-0.0356	-0.1265	-0.0526	-0.0640	-0.1165	-0.0972	-0.1286	-0.1370
VIETNAM DISSENT	4 135	-0.0641	0.0574	0.0977	-0.0620	-0.1123	0.0267	0.0046	-0.0676	-0.0976	-0.1038	-0.1311
VIETNAM DISSENT	5 136	-0.1165	0.0415	0.0383	0.0127	-0.0323	0.0321	0.0218	-0.0026	-0.0359	-0.1036	-0.0743
PREP MORE MILITARY INVL	3 137	0.0410	-0.0335	-0.0231	-0.0132	0.0203	-0.0324	0.0076	0.0111	-0.0092	0.0647	0.0821
PREP MORE MILITARY INVL	5 138	0.1359	-0.0500	-0.0383	-0.0341	0.0139	-0.0508	-0.0357	-0.0157	-0.0137	0.0343	0.0514
ABORTION DISAPPROVAL	4 139	0.0674	-0.0080	-0.0098	-0.0022	0.0213	0.0016	-0.0316	0.0076	0.0168	0.0498	0.0522
ABORTION DISAPPROVAL	5 140	0.0574	-0.0127	-0.0300	-0.0366	0.0284	0.0008	-0.0607	-0.0294	-0.0041	0.0283	0.0131
POPULATION CONCERN	4 141	-0.0601	0.1091	0.1558	0.1083	0.1054	0.1296	0.1492	0.0943	0.1018	-0.0384	-0.0132
POPULATION CONCERN	5 142	-0.0123	0.0661	0.0903	0.0712	0.0611	0.0904	0.0979	0.0721	0.0643	-0.0028	-0.0128
IDEAL NUMBER CHILDREN	4 143	0.0126	0.0503	-0.0110	0.0508	0.0172	0.0409	-0.0059	0.0082	0.0357	0.0784	0.0166
IDEAL NUMBER CHILDREN	5 144	0.0054	0.0021	0.0142	0.0022	0.0297	-0.0083	-0.0271	0.0227	0.0020	0.0399	0.0350
JOB THAT PAYS OFF	1 145	0.0014	0.2820	0.2110	0.1910	0.1959	0.3057	0.2128	0.1930	0.2097	0.2158	0.1541
JOB THAT PAYS OFF	2 146	0.0291	0.1668	0.2944	0.2614	0.2642	0.1731	0.3027	0.2521	0.2429	0.1514	0.1951
JOB THAT PAYS OFF	3 147	0.0332	0.1542	0.2432	0.3741	0.3076	0.1596	0.2122	0.3656	0.2907	0.1145	0.1235
JOB THAT PAYS OFF	4 148	0.0594	0.1152	0.1461	0.2293	0.3609	0.1144	0.1583	0.2381	0.4022	0.0976	0.1068
JOB THAT PAYS OFF	5 149	0.0954	0.0735	0.0653	0.1057	0.1732	0.0629	0.0981	0.1182	0.1779	0.0854	0.1068
JOB THAT DOESN'T BUG	12 150	0.1384	-0.1353	-0.1421	-0.1133	-0.1029	-0.1004	-0.0691	-0.0932	-0.0511	-0.0842	-0.0836
JOB THAT DOESN'T BUG	12 2 151	0.1439	-0.0916	-0.1764	-0.1549	-0.1153	-0.0664	-0.1255	-0.1066	-0.0610	-0.0990	-0.1486
JOB THAT DOESN'T BUG	12 3 152	0.1304	-0.1163	-0.2015	-0.2350	-0.1578	-0.0654	-0.1314	-0.1727	-0.1173	-0.0781	-0.1332
JOB THAT DOESN'T BUG	12 4 153	0.1485	-0.0502	-0.1789	-0.1452	-0.1784	-0.0273	-0.1012	-0.0739	-0.0821	-0.0369	-0.1256
JOB THAT DOESN'T BUG	12 5 154	0.0839	-0.0025	-0.0736	-0.0708	-0.0835	0.0047	-0.0246	-0.0292	-0.0501	-0.0545	-0.0864
AMBITIOUS JOB ATTITUDE	1 155	-0.1339	0.2891	0.2544	0.2182	0.2114	0.2709	0.1877	0.1988	0.1718	0.2010	0.1653
AMBITIOUS JOB ATTITUDE	2 156	-0.1168	0.1907	0.3354	0.2969	0.2644	0.1598	0.2924	0.2444	0.2019	0.1792	0.2488
AMBITIOUS JOB ATTITUDE	3 157	-0.0927	0.1908	0.3170	0.4227	0.3195	0.1499	0.2372	0.3653	0.2729	0.1349	0.1847
AMBITIOUS JOB ATTITUDE	4 158	-0.0928	0.1170	0.2510	0.2749	0.3682	0.0921	0.1896	0.2155	0.3304	0.0899	0.1742
AMBITIOUS JOB ATTITUDE	5 159	0.0243	0.0450	0.1001	0.1263	0.1894	0.0304	0.0789	0.0985	0.1586	0.0968	0.1396

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*** OUTPUT CORRELATION MATRIX ***

	VAR	78	79	80	81	82	83	84	85	86	87	88
STATUS ASPIRED OCCUPAT 1	161	-0.0868	0.2032	0.1941	0.1390	0.1045	0.1818	0.1479	0.1260	0.0844	0.0734	0.0039
STATUS ASPIRED OCCUPAT 2	161	-0.0862	0.2207	0.2316	0.1631	0.1244	0.1861	0.1616	0.1258	0.0758	0.0591	0.0485
STATUS ASPIRED OCCUPAT 3	162	-0.1159	0.2497	0.2266	0.2128	0.1488	0.1730	0.1756	0.1574	0.0980	0.0621	0.0138
STATUS ASPIRED OCCUPAT 4	163	-0.1089	0.2304	0.2043	0.1737	0.1656	0.2001	0.1682	0.1551	0.1150	0.0760	0.0565
STATUS ASPIRED OCCUPAT 5	164	-0.0705	0.2242	0.2193	0.1839	0.1504	0.1899	0.1951	0.1699	0.1448	0.0139	0.0108
DELINQ BEHAV IN SCHOOL 1	165	0.0093	-0.1928	-0.0946	-0.1148	-0.0583	-0.1130	-0.0291	-0.0626	-0.0474	-0.1863	-0.0990
DELINQ BEHAV IN SCHOOL 2	166	0.0630	-0.1293	-0.1021	-0.1369	-0.0553	-0.0802	-0.0825	-0.1135	-0.0308	-0.1449	-0.1514
DELINQ BEHAV IN SCHOOL 3	167	0.0545	-0.1119	-0.0981	-0.1125	-0.0494	-0.0536	-0.0592	-0.0895	-0.0340	-0.1229	-0.1146
SERIOUSNESS OF DELINQ 1	168	0.0086	-0.1401	-0.0939	-0.0907	-0.0327	-0.0712	-0.0355	-0.0273	-0.0267	-0.1753	-0.0872
SERIOUSNESS OF DELINQ 2	169	0.0131	-0.0472	-0.0671	-0.0991	-0.0439	-0.0288	-0.0677	-0.0867	-0.0259	-0.1387	-0.1141
SERIOUSNESS OF DELINQ 3	170	0.0162	-0.0689	-0.0626	-0.0967	-0.0378	-0.0572	-0.0493	-0.0775	-0.0359	-0.1244	-0.0916
SERIOUSNESS OF DELINQ 4	171	-0.0035	-0.0296	-0.0678	-0.0793	-0.0394	0.0110	-0.0071	-0.0448	-0.0366	-0.0449	-0.0339
SERIOUSNESS OF DELINQ 5	172	0.0131	-0.1389	-0.0961	-0.1148	-0.0995	-0.0791	-0.0954	-0.0744	-0.0504	-0.1037	-0.0681
INTERPERSONAL AGGRESSN 1	173	0.0218	-0.1538	-0.0730	-0.0750	-0.0138	-0.0719	-0.0250	-0.0309	-0.0028	-0.1809	-0.0979
INTERPERSONAL AGGRESSN 2	174	0.0510	-0.0308	-0.0187	-0.0913	-0.0353	-0.0296	-0.0466	-0.0747	-0.0116	-0.0917	-0.0982
INTERPERSONAL AGGRESSN 3	175	0.0338	-0.0410	-0.0240	-0.0572	0.0038	-0.0534	-0.0389	-0.0572	0.0143	-0.0865	-0.0773
INTERPERSONAL AGGRESSN 4	176	0.0772	-0.0118	-0.0137	-0.0192	0.0059	0.0192	0.0238	-0.0051	0.0336	-0.0554	-0.0191
INTERPERSONAL AGGRESSN 5	177	0.0726	-0.1057	-0.0307	-0.0818	-0.0240	-0.0622	-0.0211	-0.0315	-0.0137	-0.0527	-0.0109
THEFT AND VANDALISM 1	178	-0.0185	-0.1374	-0.1012	-0.1096	-0.0579	-0.0577	-0.0375	-0.0512	-0.0467	-0.1856	-0.0977
THEFT AND VANDALISM 2	179	0.0064	-0.0480	-0.0810	-0.0894	-0.0516	-0.0248	-0.0621	-0.0846	-0.0323	-0.1447	-0.1274
THEFT AND VANDALISM 3	180	0.0273	-0.0701	-0.0639	-0.1041	-0.0572	-0.0470	-0.0359	-0.0719	-0.0385	-0.1344	-0.0965
THEFT AND VANDALISM 4	181	-0.0157	-0.0402	-0.0809	-0.0924	-0.0036	0.0033	-0.0211	-0.0534	-0.0689	-0.0324	-0.0291
THEFT AND VANDALISM 5	182	0.0204	-0.1421	-0.0970	-0.1163	-0.1143	-0.0975	-0.0984	-0.0777	-0.0659	-0.1063	-0.0713
DAILY CIGARETTE USE=1	3 183	0.0269	-0.1536	-0.1084	-0.1102	-0.0468	-0.0844	-0.0528	-0.0548	-0.0240	-0.0829	-0.0327
DAILY CIGARETTE USE=1	4 184	0.0408	-0.1324	-0.0924	-0.0871	-0.0244	-0.0600	-0.0433	-0.0229	-0.0121	-0.0640	-0.0260
DAILY CIGARETTE USE=1	5 185	0.0261	-0.1123	-0.0841	-0.0708	-0.0069	-0.0693	-0.0571	-0.0418	-0.0422	-0.0779	-0.0304
ALCOHOL USE 1-6	3 186	0.0281	-0.0803	-0.0624	-0.0531	-0.0353	-0.0526	-0.0724	-0.0477	-0.0241	-0.0544	0.0010

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*** OUTPUT CORRELATION MATRIX ***

		VAR	74	79	80	81	82	83	84	85	86	87	88
ALCOHOL USE 1-6	4	187	0.0399	-0.0528	-0.0361	-0.0387	-0.0477	-0.0138	-0.0417	-0.0274	-0.0234	-0.0373	-0.0220
ALCOHOL USE 1-6	5	188	-0.0118	-0.0274	-0.0665	-0.0567	-0.0585	-0.0091	-0.0560	-0.0469	-0.0265	-0.0379	-0.0339
MARIJUANA USE 1-6	3	189	-0.0442	-0.0452	-0.0086	-0.0494	-0.0442	-0.0227	-0.0151	-0.0215	-0.0395	-0.0600	-0.0597
MARIJUANA USE 1-6	4	190	-0.0551	-0.0511	-0.0221	-0.0542	-0.0735	-0.0170	-0.0136	-0.0526	-0.0687	-0.0487	-0.0770
MARIJUANA USE 1-6	5	191	-0.0601	-0.0621	-0.0454	-0.0840	-0.0864	-0.0267	-0.0404	-0.0597	-0.0635	-0.0600	-0.0529
DRUG USE: AMPH, BARB, LSD 3	192	-0.0355	-0.0200	0.0052	-0.0359	-0.0171	0.0011	0.0046	-0.0127	-0.0379	-0.0593	-0.0022	
DRUG USE: AMPH, BARB, LSD 4	193	-0.0130	-0.0323	-0.0056	-0.0421	-0.0446	-0.0045	0.0141	-0.0308	-0.0603	-0.0693	-0.0598	
DRUG USE: AMPH, BARB, LSD 5	194	-0.0056	-0.0611	-0.0160	-0.0734	-0.0750	-0.0236	-0.0166	-0.0423	-0.0433	-0.1057	-0.0330	
SCHOOL MEAN S.E.I.	1	195	-0.0739	-0.0339	0.0203	0.0017	0.0607	0.0137	0.0287	0.0029	0.0632	-0.0644	-0.0686
SCHOOL MEAN QUICK TEST 1	196	-0.0695	0.0049	0.0557	0.0315	0.0588	0.0606	0.0841	0.0293	0.0652	-0.0394	-0.0142	
SCHOOL MEAN GATES-I	1	197	-0.0520	0.0285	0.0573	0.0413	0.0682	0.0829	0.0690	0.0155	0.0651	-0.0356	-0.0423
SCHOOL MEAN GATES	1	198	-0.0557	0.0090	0.0489	0.0366	0.0767	0.0758	0.0656	0.0327	0.0773	-0.0405	-0.0319
PARTICIPANT IN 1970=1	4	199	0.0459	0.0637	0.0054	0.0524	99.9999	0.0497	0.0126	0.0641	99.9999	0.0569	0.0049

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*** OUTPUT CORRELATION MATRIX ***

		VAR	89	90	91	92	93	94	95	96	97	98	99
HAPPINESS	4	90	0.6081										
NEGATIVE AFFECT STATES	1	91	-0.3062	-0.3099									
NEGATIVE AFFECT STATES	2	92	-0.4519	-0.4209	0.5828								
NEGATIVE AFFECT STATES	3	93	-0.6062	-0.4634	0.5178	0.6886							
NEGATIVE AFFECT STATES	4	94	-0.4941	-0.6202	0.4923	0.6309	0.7157						
SOMATIC SYMPTOMS	1	95	-0.2217	-0.2373	0.5646	0.4165	0.3898	0.3794					
SOMATIC SYMPTOMS	2	96	-0.3164	-0.2846	0.4341	0.5987	0.4965	0.4537	0.5270				
SOMATIC SYMPTOMS	3	97	-0.3951	-0.3018	0.3699	0.4521	0.6327	0.5154	0.4535	0.6177			
SOMATIC SYMPTOMS	4	98	-0.2985	-0.3587	0.3464	0.4304	0.5081	0.6217	0.4551	0.5905	0.6657		
IMPULSE TO AGGRESSION	1	99	-0.1757	-0.2036	0.5370	0.3459	0.2684	0.2679	0.3469	0.2609	0.2069	0.1833	
IMPULSE TO AGGRESSION	2	100	-0.3243	-0.3107	0.3570	0.6595	0.4586	0.4014	0.2539	0.3804	0.3056	0.2786	0.4624
IMPULSE TO AGGRESSION	3	101	-0.3726	-0.2992	0.2821	0.4469	0.6026	0.4549	0.1688	0.2658	0.3778	0.3024	0.3648
IMPULSE TO AGGRESSION	4	102	-0.2688	-0.4090	0.3096	0.4468	0.4447	0.6521	0.2027	0.2552	0.3038	0.3886	0.3321
SOCIAL VALUES CLUSTER	1	103	0.1770	0.1431	-0.1940	-0.1298	-0.1189	-0.0980	-0.2676	-0.1380	-0.1295	-0.1241	-0.3126
SOCIAL VALUES CLUSTER	2	104	0.2649	0.2052	-0.1429	-0.2221	-0.1560	-0.1433	-0.1535	-0.1990	-0.1364	-0.1431	-0.2094
SOCIAL VALUES CLUSTER	3	105	0.3282	0.2441	-0.1268	-0.1656	-0.2067	-0.1808	-0.1542	-0.1555	-0.2242	-0.1801	-0.1735
SOCIAL VALUES CLUSTER	4	106	0.2462	0.3361	-0.1210	-0.1536	-0.1678	-0.2272	-0.1184	-0.1260	-0.1700	-0.2136	-0.1643
INTERNAL CONTROL	1	107	0.1966	0.1339	-0.3094	-0.1972	-0.1930	-0.2207	-0.2917	-0.1539	-0.1475	-0.1638	-0.2499
INTERNAL CONTROL	2	108	0.1435	0.1489	-0.2339	-0.3049	-0.2363	-0.2565	-0.2411	-0.2604	-0.2160	-0.2103	-0.2073
INTERNAL CONTROL	3	109	0.2298	0.2080	-0.2004	-0.2725	-0.3450	-0.3109	-0.1874	-0.1964	-0.2632	-0.2066	-0.1513
INTERNAL CONTROL	4	110	0.2010	0.2828	-0.1977	-0.2344	-0.2739	-0.3544	-0.1933	-0.1746	-0.2346	-0.2622	-0.1230
TRUST IN PEOPLE	1	111	0.1134	0.0790	-0.1896	-0.1047	-0.1196	-0.1314	-0.1641	-0.0528	-0.0894	-0.0521	-0.1378
TRUST IN PEOPLE	2	112	0.1480	0.1010	-0.1211	-0.2144	-0.1189	-0.0968	-0.0821	-0.0997	-0.0323	-0.0176	-0.0908
TRUST IN PEOPLE	3	113	0.1913	0.1397	-0.1267	-0.1937	-0.2382	-0.1752	-0.0825	-0.1285	-0.1452	-0.1266	-0.1082
TRUST IN PEOPLE	4	114	0.1482	0.2089	-0.1012	-0.1730	-0.1977	-0.2441	-0.0844	-0.1078	-0.1065	-0.1161	-0.0804
TRUST IN GOVERNMENT	1	115	0.1313	0.1738	-0.3009	-0.2057	-0.1814	-0.1616	-0.2420	-0.1306	-0.1413	-0.1198	-0.2332
TRUST IN GOVERNMENT	2	116	0.2184	0.1896	-0.2219	-0.2767	-0.2271	-0.1889	-0.1665	-0.2421	-0.2359	-0.1722	-0.1855

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*** JOINT CORRELATION MATRIX ***

		VAR	89	90	91	92	93	94	95	96	97	98	99
TRUST IN GOVERNMENT	3	117	0.2614	0.2069	-0.1199	-0.1930	-0.2616	-0.2145	-0.1395	-0.1828	-0.2576	-0.1972	-0.1130
TRUST IN GOVERNMENT	4	118	0.2134	0.2316	-0.1068	-0.1583	-0.1263	-0.1426	-0.1071	-0.1101	-0.1346	-0.0914	-0.1014
TRUST IN GOVERNMENT	5	119	0.1401	0.1742	-0.0583	-0.0959	-0.0864	-0.0876	-0.0482	-0.0745	-0.0841	-0.0589	-0.1169
INTEREST IN GOVERNMENT	1	120	0.1907	0.0750	-0.0397	-0.0653	-0.0672	-0.0487	0.0209	-0.0090	-0.0360	-0.0046	-0.1519
INTEREST IN GOVERNMENT	2	121	0.1071	0.1018	-0.0506	-0.0759	-0.0818	-0.0804	-0.0925	-0.0620	-0.0532	-0.0326	-0.1083
INTEREST IN GOVERNMENT	3	122	0.1232	0.0890	-0.0522	-0.0724	-0.0036	-0.0456	-0.0363	-0.0356	-0.0473	-0.0102	-0.1191
INTEREST IN GOVERNMENT	4	123	0.1323	0.1304	-0.0455	-0.1094	-0.0889	-0.0905	-0.0501	-0.0597	-0.0391	-0.0223	-0.0926
INTEREST IN GOVERNMENT	5	124	0.1076	0.0915	-0.0657	-0.0621	-0.0842	-0.0740	-0.0750	-0.0759	-0.0822	-0.0693	-0.0924
GOVT SHLD END DISCRIM	3	125	0.0448	0.0313	-0.1021	-0.0815	-0.1186	-0.0860	-0.1045	-0.0973	-0.0891	-0.1015	-0.0816
GOVT SHLD END DISCRIM	4	126	0.0449	0.0578	-0.0791	-0.0637	-0.1004	-0.1357	-0.1160	-0.1202	-0.1346	-0.1642	-0.0793
GOVT SHLD END DISCRIM	5	127	0.0406	-0.0272	-0.0179	-0.0070	-0.0174	0.0082	-0.0077	0.0260	0.0299	0.0174	-0.0368
SOCIAL DISTANCE (RACE)	3	128	-0.0665	-0.0802	0.1001	0.0983	0.1366	0.1210	0.1302	0.0920	0.0856	0.1348	0.0862
SOCIAL DISTANCE (RACE)	4	129	-0.0177	-0.0602	0.0907	0.0899	0.1641	0.1511	0.1064	0.1188	0.1124	0.1793	0.0749
SOCIAL DISTANCE (RACE)	5	130	-0.0411	-0.0576	0.0865	0.0326	0.0768	0.0954	0.0697	0.0249	0.0382	0.0599	0.0799
PERCEIVED DISCRIMINATN	3	131	-0.0007	-0.0130	-0.0278	0.0170	0.0031	-0.0058	-0.0307	0.0112	0.0300	0.0155	-0.0292
PERCEIVED DISCRIMINATN	4	132	0.0037	0.0137	-0.0565	-0.0434	-0.0573	-0.0328	-0.0852	-0.0724	-0.0320	-0.0182	-0.0654
PERCEIVED DISCRIMINATN	5	133	0.0368	0.0225	-0.0597	-0.0165	-0.0281	-0.0368	-0.0766	-0.0313	-0.0173	-0.0256	-0.0742
VIETNAM DISSENT	3	134	-0.1456	-0.1273	0.0213	0.0489	0.0477	0.0528	0.0270	0.0614	0.1059	0.0602	0.0424
VIETNAM DISSENT	4	135	-0.1416	-0.1681	0.0045	0.0351	0.0102	0.0621	-0.0183	-0.0102	0.0523	0.0327	0.0395
VIETNAM DISSENT	5	136	-0.0862	-0.1134	-0.0308	-0.0002	-0.0224	0.0048	-0.0328	-0.0423	-0.0063	-0.0391	0.0540
PREP MORE MILITARY INFL	3	137	0.0816	0.0836	0.0085	-0.0276	-0.0356	-0.0273	0.0355	-0.0105	-0.0663	-0.0335	0.0080
PREP MORE MILITARY INFL	5	138	0.0207	0.0353	0.0883	0.0050	0.0766	0.0548	0.0904	0.0693	0.0280	0.0749	-0.0052
ABORTION DISAPPROVAL	4	139	0.0818	0.0586	0.0320	0.0022	-0.0289	-0.0094	0.0590	0.0557	0.0058	0.0062	-0.0486
ABORTION DISAPPROVAL	5	140	-0.0101	-0.0180	0.0524	-0.0007	0.0098	0.0295	0.0744	0.0700	0.0528	0.0890	-0.0589
POPULATION CONCERN	4	141	-0.0183	-0.0237	0.0067	-0.0056	-0.0254	-0.0023	-0.0687	-0.0600	-0.0762	-0.0731	0.0099
POPULATION CONCERN	5	142	-0.0200	-0.0086	0.0003	0.0247	0.0019	0.0213	-0.0686	-0.0333	-0.0577	-0.0338	0.0214
IDEAL NUMBER CHILDREN	4	143	0.0467	0.0307	-0.0203	0.0238	0.0085	0.0263	-0.0027	-0.0142	0.0347	0.0100	-0.0271

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*** OUTPUT CORRELATION MATRIX ***

		VAR	89	90	91	92	93	94	95	96	97	98	99
IDEAL NUMBER CHILDREN	5	144	0.3555	0.0249	0.1096	-0.0034	0.0030	-0.0009	0.0214	-0.0653	0.0390	0.0032	-0.0454
JOB THAT PAYS OFF	1	145	0.1028	0.1141	-0.1116	-0.0742	-0.0624	-0.0691	-0.2198	-0.1164	-0.0978	-0.1152	-0.1073
JOB THAT PAYS OFF	2	146	0.1605	0.1326	-0.0414	-0.0969	-0.0718	-0.0659	-0.1037	-0.1345	-0.1115	-0.1117	-0.0435
JOB THAT PAYS OFF	3	147	0.1708	0.1096	-0.0458	-0.0466	-0.0585	-0.0537	-0.0620	-0.0486	-0.1631	-0.1029	-0.0270
JOB THAT PAYS OFF	4	148	0.1033	0.1524	-0.0440	-0.0278	-0.0272	-0.0356	-0.0466	-0.0455	-0.0977	-0.1134	-0.0491
JOB THAT PAYS OFF	5	149	0.0799	0.0700	0.0071	-0.0271	0.0368	0.0444	0.0603	0.0320	0.0323	0.0374	-0.0450
JOB THAT DOESNT BUG ME	1	150	-0.0784	-0.0657	0.2197	0.1492	0.1423	0.1340	0.2210	0.1338	0.1220	0.1194	0.1622
JOB THAT DOESNT BUG ME	2	151	-0.1195	-0.0984	0.1771	0.2285	0.2068	0.1870	0.1548	0.1978	0.1367	0.1477	0.1362
JOB THAT DOESNT BUG ME	3	152	-0.1844	-0.1529	0.1473	0.1925	0.2866	0.2410	0.1401	0.1565	0.2330	0.1869	0.0773
JOB THAT DOESNT BUG ME	4	153	-0.1424	-0.1849	0.1429	0.1973	0.2635	0.3091	0.1596	0.1461	0.1971	0.2548	0.0421
JOB THAT DOESNT BUG ME	5	154	-0.1177	-0.1497	0.0941	0.1344	0.1614	0.1633	0.0756	0.1092	0.1094	0.0789	0.0584
AMBITIOUS JOB ATTITUDE	1	155	0.1299	0.1154	-0.2660	-0.1825	-0.1676	-0.1636	-0.3332	-0.1954	-0.1721	-0.1803	-0.2127
AMBITIOUS JOB ATTITUDE	2	156	0.2015	0.1692	-0.1983	-0.2687	-0.2344	-0.2130	-0.2055	-0.2632	-0.1927	-0.2037	-0.1526
AMBITIOUS JOB ATTITUDE	3	157	0.2534	0.1961	-0.1512	-0.1914	-0.2784	-0.2411	-0.1547	-0.1620	-0.2982	-0.2225	-0.0842
AMBITIOUS JOB ATTITUDE	4	158	0.1892	0.2587	-0.1544	-0.1892	-0.2496	-0.2978	-0.1680	-0.1568	-0.2339	-0.2979	-0.0681
AMBITIOUS JOB ATTITUDE	5	159	0.1475	0.1691	-0.0754	-0.1368	-0.1124	-0.1099	-0.0227	-0.0734	-0.0721	-0.0441	-0.0796
STATUS ASPIRED OCCUPAT	1	160	-0.0271	-0.0204	-0.1134	-0.0117	-0.0496	-0.0718	-0.2098	-0.1072	-0.1151	-0.1354	-0.1116
STATUS ASPIRED OCCUPAT	2	161	0.0310	-0.0130	-0.0785	-0.0463	-0.0843	-0.0786	-0.1837	-0.1596	-0.1392	-0.1500	-0.0742
STATUS ASPIRED OCCUPAT	3	162	0.0123	0.0036	-0.1058	-0.0349	-0.0739	-0.0733	-0.1988	-0.1433	-0.1499	-0.1554	-0.1124
STATUS ASPIRED OCCUPAT	4	163	0.0427	0.0222	-0.1297	-0.0847	-0.1042	-0.0896	-0.2025	-0.1585	-0.1432	-0.1560	-0.1253
STATUS ASPIRED OCCUPAT	5	164	-0.0246	-0.0353	-0.0512	0.0025	-0.0074	-0.0354	-0.1508	-0.1321	-0.1266	-0.1399	-0.0726
DELINQ BEHAV IN SCHOOL	1	165	-0.0681	-0.0591	0.2032	0.1274	0.1146	0.1155	0.2681	0.1490	0.1707	0.1399	0.3697
DELINQ BEHAV IN SCHOOL	2	166	-0.0959	-0.0308	0.1987	0.2011	0.1505	0.1225	0.2256	0.2814	0.2240	0.1810	0.2946
DELINQ BEHAV IN SCHOOL	3	167	-0.0804	-0.0413	0.1745	0.1621	0.1811	0.1385	0.1788	0.2021	0.2527	0.2012	0.2495
SERIOUSNESS OF DELINQ	1	168	-0.0439	-0.0310	0.2254	0.1243	0.0839	0.0865	0.2272	0.0997	0.0972	0.0877	0.3489
SERIOUSNESS OF DELINQ	2	169	-0.0719	-0.0243	0.1740	0.1658	0.1203	0.0883	0.1532	0.2353	0.1635	0.1616	0.1961
SERIOUSNESS OF DELINQ	3	170	-0.0273	-0.0535	0.1493	0.1636	0.2034	0.1514	0.1327	0.1675	0.2757	0.1846	0.1552

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*** OUTPUT CORRELATION MATRIX ***

		VAR	87	90	91	92	93	94	95	96	97	98	99
SERIOUSNESS OF DELINQ	4	171	-0.0493	-0.0361	0.0884	0.0516	0.0834	0.0813	0.0654	0.0493	0.0804	0.1058	0.1765
SERIOUSNESS OF DELINQ	5	172	-0.0447	-0.0340	0.0631	0.0253	0.0440	0.0269	0.0611	0.0332	0.0510	0.0576	0.1805
INTERPERSONAL AGGRESSION	1	173	-0.0655	-0.0681	0.2299	0.1357	0.1087	0.1151	0.2686	0.1418	0.1430	0.1192	0.4257
INTERPERSONAL AGGRESSION	2	174	-0.0763	-0.0199	0.1694	0.1743	0.1279	0.1122	0.1823	0.2518	0.1725	0.1959	0.1803
INTERPERSONAL AGGRESSION	3	175	-0.0843	-0.0566	0.1659	0.1669	0.2037	0.1855	0.1786	0.1940	0.2809	0.2242	0.1595
INTERPERSONAL AGGRESSION	4	176	-0.0350	-0.0341	0.1490	0.0747	0.1361	0.1404	0.1411	0.1187	0.1623	0.1938	0.1694
INTERPERSONAL AGGRESSION	5	177	-0.0377	-0.0514	0.0815	0.0451	0.0781	0.0751	0.1337	0.0967	0.1147	0.1100	0.1608
THEFT AND VANDALISM	1	178	-0.0600	-0.0397	0.2088	0.1277	0.0823	0.0717	0.2009	0.0933	0.0973	0.0635	0.3662
THEFT AND VANDALISM	2	179	-0.0868	-0.0386	0.1687	0.1756	0.1164	0.0962	0.1267	0.2104	0.1644	0.1481	0.2220
THEFT AND VANDALISM	3	180	-0.1148	-0.0578	0.1443	0.1646	0.1969	0.1460	0.1108	0.1496	0.2578	0.1673	0.1781
THEFT AND VANDALISM	4	181	-0.0429	-0.0373	0.0571	0.0540	0.0683	0.0662	0.0335	0.0287	0.0565	0.0800	0.1842
THEFT AND VANDALISM	5	182	-0.0425	-0.0303	0.0637	0.0383	0.0429	0.0415	0.0546	0.0367	0.0455	0.0513	0.1838
DAILY CIGARETTE USE=1	3	183	-0.0069	0.0189	0.0589	0.0089	0.0326	-0.0018	0.0741	0.1146	0.1291	0.1174	0.1727
DAILY CIGARETTE USE=1	4	184	-0.0034	-0.0003	0.0567	0.0115	0.0486	0.0328	0.0634	0.0750	0.1074	0.1140	0.1614
DAILY CIGARETTE USE=1	5	185	-0.0360	-0.0424	0.0593	0.0113	0.0593	0.0476	0.1125	0.0802	0.1084	0.1259	0.1220
ALCOHOL USE 1-6	3	186	-0.0161	0.0059	0.0048	-0.0079	0.0288	-0.0175	0.0423	0.0520	0.0651	0.0177	0.1935
ALCOHOL USE 1-6	4	187	-0.0384	-0.0647	0.0343	0.0544	0.0862	0.0607	0.0383	0.0606	0.0634	0.0353	0.1877
ALCOHOL USE 1-6	5	188	-0.0220	-0.0544	-0.0051	0.0361	0.0379	0.0377	0.0214	0.0113	0.0106	-0.0011	0.1245
MARIJUANA USE 1-6	3	189	-0.0064	0.0164	-0.0064	-0.0255	-0.0128	-0.0263	0.0212	0.0243	0.0363	0.0364	0.1074
MARIJUANA USE 1-6	4	190	-0.0579	-0.0397	-0.0118	0.0012	0.0022	0.0042	-0.0054	0.0116	0.0372	0.0251	0.1066
MARIJUANA USE 1-6	5	191	-0.0217	-0.0646	0.0121	0.0153	-0.0012	0.0194	0.0253	-0.0141	0.0200	-0.0187	0.1167
DRUG USE: AMPH, BARD, LSD	3	192	-0.0133	-0.0078	0.0310	-0.0094	0.0294	0.0325	0.0297	0.0739	0.0485	0.1041	0.0617
DRUG USE: AMPH, BARD, LSD	4	193	-0.0276	-0.0351	0.0029	0.0334	0.0575	0.0536	0.0571	0.0820	0.1123	0.1375	0.1194
DRUG USE: AMPH, BARD, LSD	5	194	-0.0314	-0.0630	0.0377	0.0238	0.0220	0.0391	0.0290	0.0103	0.0688	0.0295	0.1334
SCHOOL MEAN G.P.A.	531 1	195	-0.0464	-0.0159	-0.0643	0.0080	-0.0615	-0.0618	-0.1213	-0.0898	-0.1222	-0.0979	0.0622
SCHOOL MEAN QUOTE TEST	1	196	-0.0271	-0.0064	-0.0542	-0.0041	-0.0446	-0.0660	-0.1294	-0.0997	-0.1328	-0.1057	0.0718
SCHOOL MEAN READ-J	1	197	-0.0293	-0.0013	-0.0373	0.0283	-0.0184	-0.0530	-0.1276	-0.0734	-0.1150	-0.1041	0.0857

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*** OUTPUT CORRELATION MATRIX ***

		VAR	89	90	91	92	93	94	95	96	97	98	99
SCHOOL LEAV TAKES	1	100	-0.0286	0.0153	-0.0489	0.0115	-0.0373	-0.0750	-0.1443	-0.1008	-0.1462	-0.1304	0.0782
PARTICIPANT IN 1970-1	4	100	0.0089	99.9999	-0.0765	-0.0374	0.0048	99.9999	-0.1084	-0.0247	-0.0460	99.9999	-0.0895

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*** OUTPUT CORRELATION MATRIX ***

		VAR	100	101	102	103	104	105	106	107	108	109	110
IMPULSE TO AGGRESSION	1	101	0.5361										
IMPULSE TO AGGRESSION	2	102	0.5097	0.5722									
SOCIAL VALUES CLUSTER	1	103	-0.1936	-0.0883	-0.0986								
SOCIAL VALUES CLUSTER	2	104	-0.3229	-0.1934	-0.1692	0.5062							
SOCIAL VALUES CLUSTER	3	105	-0.2729	-0.2878	-0.2162	0.3866	0.5475						
SOCIAL VALUES CLUSTER	4	106	-0.2418	-0.2146	-0.3021	0.3417	0.5163	0.6008					
INTERNAL CONTROL	1	107	-0.1493	-0.1016	-0.1144	0.3440	0.1906	0.1411	0.1172				
INTERNAL CONTROL	2	108	-0.2421	-0.1558	-0.1834	0.2497	0.3133	0.2073	0.2003	0.4253			
INTERNAL CONTROL	3	109	-0.2063	-0.2452	-0.2180	0.2076	0.2299	0.2499	0.2008	0.3335	0.5276		
INTERNAL CONTROL	4	110	-0.1450	-0.1794	-0.2617	0.2001	0.2239	0.2205	0.2848	0.3519	0.4528	0.5586	
TRUST IN PEOPLE	1	111	-0.1199	-0.0750	-0.0782	0.1112	0.0841	0.0362	0.0268	0.1462	0.1728	0.1239	0.1125
TRUST IN PEOPLE	2	112	-0.1577	-0.0655	-0.0657	0.0633	0.1579	0.0945	0.0820	0.1168	0.2037	0.1536	0.1398
TRUST IN PEOPLE	3	113	-0.1484	-0.1623	-0.0911	0.0785	0.1527	0.1012	0.0775	0.1726	0.2030	0.2459	0.2232
TRUST IN PEOPLE	4	114	-0.1201	-0.1195	-0.1553	0.0664	0.1132	0.0826	0.1203	0.1590	0.1878	0.2127	0.2543
TRUST IN GOVERNMENT	1	115	-0.1701	-0.1012	-0.0668	0.2562	0.1734	0.1464	0.1097	0.2422	0.1651	0.1340	0.1257
TRUST IN GOVERNMENT	2	116	-0.2272	-0.1441	-0.1250	0.1644	0.2333	0.1759	0.1486	0.1711	0.2578	0.1677	0.1913
TRUST IN GOVERNMENT	3	117	-0.1731	-0.1073	-0.1303	0.1332	0.1490	0.2019	0.1502	0.1377	0.1997	0.2731	0.2431
TRUST IN GOVERNMENT	4	118	-0.1593	-0.1296	-0.1506	0.1598	0.1886	0.2055	0.1991	0.0790	0.1140	0.1507	0.2429
TRUST IN GOVERNMENT	5	119	-0.1271	-0.1405	-0.0992	0.1015	0.1355	0.1231	0.1179	0.0528	0.0776	0.0911	0.1160
INTEREST IN GOVERNMENT	1	120	-0.1046	-0.0768	-0.0640	0.1278	0.1232	0.0591	0.0998	0.0645	0.0400	0.0582	0.0344
INTEREST IN GOVERNMENT	2	121	-0.1129	-0.0804	-0.0531	0.1631	0.1950	0.1304	0.1149	0.1049	0.1120	0.1150	0.0471
INTEREST IN GOVERNMENT	3	122	-0.1146	-0.1119	-0.0451	0.1438	0.1412	0.0816	0.1153	0.0570	0.0524	0.0615	0.0061
INTEREST IN GOVERNMENT	4	123	-0.1031	-0.0860	-0.0703	0.1237	0.1410	0.1163	0.1419	0.0913	0.1087	0.0613	0.0456
INTEREST IN GOVERNMENT	5	124	-0.0533	-0.0625	-0.0490	0.1166	0.0990	0.0677	0.1136	0.1048	0.1092	0.0874	0.0562
GOVT BOLD AND DISCIPL	3	125	-0.1577	-0.0390	-0.0155	0.1054	0.1354	0.1824	0.1441	0.1637	0.1203	0.1138	0.1058
GOVT BOLD AND DISCIPL	4	126	-0.1520	-0.0368	-0.0545	0.1055	0.1722	0.1822	0.2389	0.1194	0.1427	0.1549	0.1625
GOVT BOLD AND DISCIPL	5	127	-0.1119	-0.0290	-0.0031	0.1117	0.1171	0.1242	0.1263	0.0809	0.0950	0.0891	0.0748

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536

*** OUTPUT CORRELATION MATRIX ***

		VAR	100	101	102	103	104	105	106	107	108	109	110
SOCIAL DISTANCE (RACE)	3	129	0.0835	0.0857	0.0492	-0.0992	-0.1465	-0.1835	-0.1658	-0.1292	-0.1149	-0.1444	-0.1255
SOCIAL DISTANCE (RACE)	4	129	0.0461	0.0336	0.0962	-0.0608	-0.1239	-0.1489	-0.1813	-0.1037	-0.1395	-0.1418	-0.1814
SOCIAL DISTANCE (RACE)	5	130	0.0261	0.0599	0.0910	-0.0307	-0.0521	-0.0589	-0.0849	-0.0827	-0.0640	-0.0617	-0.0917
PERCEIVED DISCRIMINATION	3	131	0.0104	0.0596	0.0260	0.0571	0.0443	0.0693	0.0733	0.0342	0.0109	0.0148	-0.0052
PERCEIVED DISCRIMINATION	4	132	0.0132	0.0265	0.0089	0.0469	0.0407	0.0572	0.0704	0.0899	0.0550	0.0747	0.0238
PERCEIVED DISCRIMINATION	5	133	0.0011	0.0402	0.0161	0.0785	0.0505	0.0556	0.0673	0.0886	0.0797	0.0654	0.0651
VIETNAM DISSENT	3	134	0.0718	0.0430	0.0249	-0.1071	-0.1576	-0.1838	-0.1494	-0.0531	-0.1082	-0.1166	-0.1543
VIETNAM DISSENT	4	135	0.0768	0.0789	0.1004	-0.0672	-0.1317	-0.1985	-0.1890	-0.0190	-0.0330	-0.0491	-0.1748
VIETNAM DISSENT	5	136	0.0838	0.0809	0.0768	-0.0083	-0.0648	-0.0995	-0.1029	0.0564	0.0409	0.0143	-0.0610
PREF MORE MILITARY IMPL	3	137	-0.0535	-0.0537	-0.0555	0.0116	0.0308	0.0658	0.0556	-0.0460	-0.0289	0.0495	0.0653
PREF MORE MILITARY IMPL	4	138	-0.0792	-0.0756	-0.1198	-0.0351	0.0085	0.0875	0.1005	-0.1113	-0.0652	-0.0480	0.0011
ABORTION DISAPPROVAL	4	139	-0.0861	0.1276	-0.1023	0.0460	0.0942	0.1227	0.1446	-0.0309	-0.0349	0.0303	0.0548
ABORTION DISAPPROVAL	5	140	-0.0586	-0.1014	-0.0913	0.0086	0.0402	0.0721	0.1418	-0.0724	-0.0211	-0.0470	-0.0075
POPULATION CONCERN	4	141	0.0167	0.0425	0.0407	0.0777	0.0820	0.0603	0.0478	0.0911	0.1213	0.0646	0.0621
POPULATION CONCERN	5	142	0.0645	0.0849	0.1189	0.0950	0.0393	0.0184	0.0294	0.0829	0.1011	0.0712	0.0752
IDEAL NUMBER CHILDREN	4	143	-0.0061	-0.0177	0.0015	0.0068	0.0055	0.0439	0.0465	-0.0163	0.0085	-0.0119	0.0220
IDEAL NUMBER CHILDREN	5	144	-0.0465	-0.0786	-0.0780	-0.0270	0.0079	0.0128	-0.0018	-0.0374	-0.0269	-0.0186	-0.0374
JOB THAT PAYS OFF	1	145	-0.0942	-0.0100	-0.0432	0.4004	0.1889	0.1688	0.1563	0.1741	0.1292	0.1032	0.1054
JOB THAT PAYS OFF	2	146	-0.1123	-0.0455	-0.0506	0.1619	0.3050	0.1864	0.1733	0.0595	0.1197	0.0591	0.1086
JOB THAT PAYS OFF	3	147	-0.0757	-0.0571	-0.0520	0.1140	0.1814	0.3348	0.2381	0.0161	0.0666	0.0687	0.0720
JOB THAT PAYS OFF	4	148	-0.1132	-0.0670	-0.1019	0.1293	0.1697	0.2505	0.3346	-0.0036	0.0036	0.0328	0.0859
JOB THAT PAYS OFF	5	149	-0.0637	-0.0388	-0.0503	0.0396	0.0801	0.1015	0.1380	-0.0628	-0.0339	-0.0165	0.0254
JOB THAT DOESNT BUG ME	1	150	0.1056	0.0343	0.0292	-0.2080	-0.1688	-0.0971	-0.0648	-0.3088	-0.1988	-0.1249	-0.1145
JOB THAT DOESNT BUG ME	2	151	0.1712	0.1247	0.1133	-0.1586	-0.2050	-0.1385	-0.1528	-0.2382	-0.2637	-0.2318	-0.1923
JOB THAT DOESNT BUG ME	3	152	0.1280	0.1961	0.1258	-0.1527	-0.2065	-0.2161	-0.1723	-0.2039	-0.2186	-0.3034	-0.2367
JOB THAT DOESNT BUG ME	4	153	0.0995	0.1387	0.1660	-0.0908	-0.1632	-0.1498	-0.2062	-0.2018	-0.2318	-0.2412	-0.3041
JOB THAT DOESNT BUG ME	5	154	0.0589	0.0921	0.0933	-0.0691	-0.1249	-0.1177	-0.1450	-0.0884	-0.1238	-0.1265	-0.1702

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*** OUTPUT CORRELATION MATRIX ***

	VAR	100	101	102	103	104	105	106	107	108	109	110
AMBITIOUS JOB ATTITUDE 1	155	-0.1554	-0.0428	-0.0533	0.4173	0.2577	0.1918	0.1435	0.3763	0.2573	0.1715	0.1624
AMBITIOUS JOB ATTITUDE 2	156	-0.2251	-0.1441	-0.1366	0.2318	0.3597	0.2241	0.2367	0.2502	0.3112	0.2435	0.2384
AMBITIOUS JOB ATTITUDE 3	157	-0.1593	-0.2027	-0.1423	0.1874	0.2755	0.3753	0.2808	0.1770	0.2159	0.2886	0.2396
AMBITIOUS JOB ATTITUDE 4	158	-0.1576	-0.1639	-0.2139	0.1551	0.2401	0.2765	0.3868	0.1700	0.2050	0.2299	0.3195
AMBITIOUS JOB ATTITUDE 5	159	-0.0982	-0.1063	-0.1142	0.0705	0.1457	0.1529	0.2032	0.0224	0.0785	0.0907	0.1554
STATUS ASPIRED OCCUPAT 1	160	0.0257	0.0441	0.0045	0.2049	0.0646	0.0390	0.0135	0.2251	0.1670	0.0972	0.0905
STATUS ASPIRED OCCUPAT 2	161	-0.0472	-0.0250	0.0506	0.1893	0.1015	0.0723	0.0225	0.2205	0.1624	0.1161	0.0626
STATUS ASPIRED OCCUPAT 3	162	-0.0249	-0.0123	0.0271	0.1438	0.0705	0.0539	-0.0069	0.2119	0.1987	0.1092	0.0679
STATUS ASPIRED OCCUPAT 4	163	-0.0628	-0.0382	-0.0238	0.1689	0.1147	0.0585	0.0055	0.2165	0.1860	0.1311	0.0887
STATUS ASPIRED OCCUPAT 5	164	-0.0069	0.0215	0.0321	0.1568	0.1399	0.0484	-0.0029	0.1699	0.1286	0.0824	0.0695
DELINQ BEHAV IN SCHOOL 1	165	0.1789	0.1230	0.0915	-0.3285	-0.1598	-0.1718	-0.1353	-0.1850	-0.1391	-0.1389	-0.1183
DELINQ BEHAV IN SCHOOL 2	166	0.2751	0.1557	0.0862	-0.2496	-0.2549	-0.2282	-0.1224	-0.1713	-0.1836	-0.1649	-0.0739
DELINQ BEHAV IN SCHOOL 3	167	0.2484	0.2196	0.1194	-0.2008	-0.2031	-0.2300	-0.1018	-0.1744	-0.1906	-0.1784	-0.1199
SERIOUSNESS OF DELINQ 1	168	0.1987	0.1781	0.1213	-0.2977	-0.1638	-0.1751	-0.1481	-0.1804	-0.1297	-0.1042	-0.1032
SERIOUSNESS OF DELINQ 2	169	0.2434	0.1595	0.0784	-0.1757	-0.2510	-0.2141	-0.1442	-0.1099	-0.1687	-0.1310	-0.0363
SERIOUSNESS OF DELINQ 3	170	0.2218	0.2514	0.1266	-0.1233	-0.1535	-0.2516	-0.1479	-0.1084	-0.1489	-0.1588	-0.0991
SERIOUSNESS OF DELINQ 4	171	0.1291	0.1873	0.1011	-0.1014	-0.0845	-0.1714	-0.1737	-0.0715	-0.0864	-0.0857	-0.0623
SERIOUSNESS OF DELINQ 5	172	0.0817	0.0727	0.0635	-0.1475	-0.1113	-0.0618	-0.1081	-0.0876	-0.1061	-0.0856	-0.0950
INTERPERSONAL AGGRESSN 1	173	0.1330	0.1846	0.1188	-0.3392	-0.1736	-0.1821	-0.1396	-0.1915	-0.1449	-0.1246	-0.1022
INTERPERSONAL AGGRESSN 2	174	0.2130	0.1268	0.0853	-0.1750	-0.2529	-0.2043	-0.1487	-0.1222	-0.1715	-0.1280	-0.0576
INTERPERSONAL AGGRESSN 3	175	0.2039	0.2030	0.1403	-0.1559	-0.1670	-0.2191	-0.1142	-0.1281	-0.1488	-0.1368	-0.0817
INTERPERSONAL AGGRESSN 4	176	0.1119	0.1963	0.1799	-0.1067	-0.1049	-0.1735	-0.1512	-0.0888	-0.1182	-0.1055	-0.0854
INTERPERSONAL AGGRESSN 5	177	0.0413	0.0994	0.0663	-0.1512	-0.0974	-0.0989	-0.0851	-0.1115	-0.0969	-0.0950	-0.0918
THEFT AND VANDALISM 1	178	0.2357	0.2038	0.1335	-0.2659	-0.1618	-0.1740	-0.1370	-0.1624	-0.1130	-0.0916	-0.0926
THEFT AND VANDALISM 2	179	0.2678	0.1849	0.0977	-0.1643	-0.2356	-0.2122	-0.1458	-0.1034	-0.1627	-0.1282	-0.0429
THEFT AND VANDALISM 3	180	0.2428	0.2826	0.1403	-0.1058	-0.1535	-0.2487	-0.1344	-0.1070	-0.1409	-0.1774	-0.1154
THEFT AND VANDALISM 4	181	0.1578	0.1919	0.1507	-0.0850	-0.0782	-0.1508	-0.1741	-0.0726	-0.0773	-0.0849	-0.0703

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*** OUTPUT CORRELATION MATRIX ***

		VAR	100	101	102	103	104	105	106	107	108	109	110
THEFT AND VANDALISM	5	182	0.0940	0.0802	0.0770	-0.1316	-0.1054	-0.0645	-0.1128	-0.0857	-0.1030	-0.0876	-0.0975
DAILY CIGARETTE USE=1	3	183	0.0606	0.0657	0.0002	-0.1419	-0.1839	-0.0745	-0.0095	-0.0914	-0.0928	-0.0534	-0.0344
DAILY CIGARETTE USE=1	4	184	0.0887	0.0839	0.0278	-0.1127	-0.1682	-0.0792	-0.0279	-0.0856	-0.0883	-0.0567	-0.0345
DAILY CIGARETTE USE=1	5	185	0.0648	0.0717	0.0179	-0.1007	-0.0547	-0.0617	-0.0369	-0.0947	-0.1037	-0.0337	-0.0335
ALCOHOL USE 1-6	3	186	0.1210	0.1745	0.0759	-0.1126	-0.1365	-0.1433	-0.1046	-0.0572	-0.0756	-0.0534	-0.0472
ALCOHOL USE 1-6	4	187	0.1350	0.2338	0.1518	-0.0852	-0.1148	-0.1487	-0.1406	-0.0379	-0.0534	-0.0424	-0.0600
ALCOHOL USE 1-6	5	188	0.1203	0.1461	0.1014	-0.0845	-0.1178	-0.1097	-0.1126	-0.0720	-0.0867	-0.0520	-0.0709
MARIJUANA USE 1-6	3	189	0.0699	0.1010	0.0543	-0.1320	-0.1536	-0.1566	-0.1180	-0.0450	-0.1010	-0.0851	-0.1007
MARIJUANA USE 1-6	4	190	0.1006	0.1225	0.0745	-0.1085	-0.1571	-0.1811	-0.1328	0.0031	-0.0463	-0.0308	-0.0859
MARIJUANA USE 1-6	5	191	0.0891	0.0917	0.1038	-0.1280	-0.1248	-0.1523	-0.1487	-0.0402	-0.0725	-0.0657	-0.1261
DRUG USE:AMPH,BAPB,LSD	3	192	0.0380	0.0965	0.0460	-0.0562	-0.0930	-0.1116	-0.0983	-0.0049	-0.0469	-0.0662	-0.0471
DRUG USE:AMPH,BAPB,LSD	4	193	0.1047	0.1361	0.0897	-0.0933	-0.1141	-0.1482	-0.1200	-0.0129	-0.0427	-0.0634	-0.0869
DRUG USE:AMPH,BAPB,LSD	5	194	0.0527	0.0826	0.0733	-0.0613	-0.1333	-0.1007	-0.0826	-0.0181	-0.0024	-0.0487	-0.0626
SCHOOL MEAN S.E.L.	1	195	0.0774	0.1136	0.0836	-0.0244	-0.0459	-0.0702	-0.0341	0.0888	0.0495	0.0368	0.0235
SCHOOL MEAN QUICK TEST	1	196	0.0587	0.1250	0.0704	0.0254	0.0161	-0.0118	-0.0137	0.1071	0.0828	0.0483	0.0559
SCHOOL MEAN GATB-J	1	197	0.0910	0.1251	0.0878	0.0510	0.0347	0.0194	0.0060	0.1315	0.0857	0.0603	0.0574
SCHOOL MEAN GATES	1	198	0.0686	0.1237	0.0728	0.0531	0.0318	0.0110	0.0118	0.1375	0.1019	0.0781	0.0810
PARTICIPANT IN 1970=1	4	199	-0.0356	0.0494	99.9999	0.0797	0.0178	0.0358	99.9999	0.0035	0.0072	0.0059	99.9999

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*** OUTPUT CORRELATION MATRIX ***

		VAP	111	112	113	114	115	116	117	118	119	120	121
TRUST IN PEOPLE	2	111	0.3503										
TRUST IN PEOPLE	3	113	0.3417	0.4502									
TRUST IN PEOPLE	4	114	0.2726	0.4196	0.4869								
TRUST IN GOVERNMENT	1	115	0.1956	0.1522	0.1494	0.1629							
TRUST IN GOVERNMENT	2	116	0.1736	0.2565	0.2449	0.1982	0.4522						
TRUST IN GOVERNMENT	3	117	0.1406	0.1858	0.2699	0.2310	0.3418	0.4815					
TRUST IN GOVERNMENT	4	118	0.1161	0.1668	0.2184	0.2215	0.2162	0.3648	0.4780				
TRUST IN GOVERNMENT	5	119	0.0621	0.0880	0.0859	0.1166	0.1381	0.2220	0.2937	0.3818			
INTEREST IN GOVERNMENT	1	120	0.0869	0.0621	0.0657	0.0464	0.0595	-0.0047	-0.0143	0.0269	0.0093		
INTEREST IN GOVERNMENT	2	121	0.0073	0.0430	0.0730	0.0290	0.0905	0.0659	0.0092	-0.0303	-0.0118	0.4027	
INTEREST IN GOVERNMENT	3	122	0.0620	0.0791	0.0939	0.0420	0.0857	0.0350	0.0678	-0.0070	0.0095	0.4126	0.5396
INTEREST IN GOVERNMENT	4	123	0.0523	0.0371	0.0627	0.0402	0.0888	0.0704	0.0840	-0.0259	0.0015	0.3290	0.4452
INTEREST IN GOVERNMENT	5	124	-0.0050	0.0270	0.0713	0.0170	0.0755	0.0518	0.0256	-0.0625	0.0226	0.2768	0.3573
GOVT SHLD END DISCRIM	3	125	0.0207	0.0223	0.1154	0.0688	0.2128	0.1296	0.1432	0.0145	0.0198	0.0191	0.0354
GOVT SHLD END DISCRIM	4	126	0.0242	0.0462	0.0942	0.1197	0.1762	0.1358	0.1172	0.0328	-0.0176	0.0651	0.0602
GOVT SHLD END DISCRIM	5	127	0.0004	0.0176	0.0510	0.0963	0.1206	0.1027	0.1027	0.0368	0.0448	0.0213	0.0753
SOCIAL DISTANCE (RACE)	3	128	-0.0361	-0.0636	-0.0985	-0.1370	-0.1636	-0.1245	-0.1111	-0.0209	-0.0099	-0.0254	-0.0222
SOCIAL DISTANCE (RACE)	4	129	0.0024	-0.0440	-0.0489	-0.1201	-0.1174	-0.0894	-0.0929	0.0118	0.0430	0.0017	-0.0255
SOCIAL DISTANCE (RACE)	5	130	-0.0020	-0.0369	0.0080	-0.0926	-0.1071	-0.0783	-0.0462	0.0239	0.0117	-0.0527	-0.0397
PERCEIVED DISCRIMINATE	3	131	-0.0002	0.0271	0.0284	0.0210	0.0848	0.0145	-0.0405	-0.0723	-0.0532	0.0617	0.0274
PERCEIVED DISCRIMINATE	4	132	-0.0189	0.0201	0.0500	0.0007	0.1108	0.0633	0.0170	-0.1209	-0.1065	0.0613	0.0772
PERCEIVED DISCRIMINATE	5	133	-0.0071	0.0380	0.0327	0.0391	0.0946	0.0295	-0.0055	-0.0999	-0.1264	0.0749	0.0773
VIETNAM DISSENT	3	134	-0.0512	-0.0374	-0.0871	-0.0756	-0.1113	-0.2483	-0.2975	-0.3695	-0.2246	-0.0285	-0.0386
VIETNAM DISSENT	4	135	-0.1495	-0.0376	-0.0541	-0.0522	-0.0275	-0.1289	-0.2135	-0.4774	-0.2683	0.0220	0.0758
VIETNAM DISSENT	5	136	-0.0388	-0.0190	-0.0081	-0.0342	-0.0104	-0.0886	-0.1693	-0.3441	-0.3699	0.0770	0.1496
DEAF MORE MILITARY INFL	3	137	0.0003	-0.0159	0.0016	-0.0036	-0.0154	0.0832	0.1538	0.2447	0.1616	-0.0440	-0.0661
DEAF MORE MILITARY INFL	5	138	-0.0191	0.0051	-0.0540	-0.0410	-0.1061	0.0020	0.0709	0.2181	0.2694	-0.0462	-0.0705

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541

*** OUTPUT CORRELATION MATRIX ***

		VAR	111	112	113	114	115	116	117	118	119	120	121
ABORTION DISAPPROVAL	4	129	-0.0012	0.0189	0.0069	-0.0001	0.0243	0.0598	0.0675	0.1503	0.0975	-0.0415	-0.0683
ABORTION DISAPPROVAL	5	140	-0.0325	-0.0166	-0.0649	-0.0714	-0.0492	-0.0176	0.0027	0.0737	0.1021	0.0641	-0.0309
POPULATION CONCERN	4	141	0.0533	0.0285	0.0911	0.0202	0.0109	0.0201	0.0114	-0.0777	-0.0638	0.0825	0.1323
POPULATION CONCERN	5	142	0.0084	0.0400	0.0610	0.0122	0.0033	0.0030	-0.0031	-0.0962	-0.0692	0.0034	0.0786
IDEAL NUMBER CHILDREN	4	143	-0.0070	-0.0213	-0.0152	-0.0262	0.0162	0.0355	0.0170	0.0549	0.0430	0.0211	-0.0035
IDEAL NUMBER CHILDREN	5	144	-0.0136	-0.0335	-0.0635	-0.0317	-0.0206	0.0089	0.0163	0.0450	0.0762	0.0323	-0.0032
JOB THAT PAYS OFF	1	145	0.0210	0.0107	0.0053	0.0480	0.1650	0.1056	0.0635	0.0904	-0.0049	0.0378	0.1015
JOB THAT PAYS OFF	2	146	-0.0166	0.0096	0.0303	0.0191	0.0670	0.1469	0.1066	0.0466	0.0135	0.0168	0.0849
JOB THAT PAYS OFF	3	147	-0.0106	0.0102	-0.0297	-0.0294	0.0793	0.0727	0.1065	0.0576	0.0259	-0.0109	0.0333
JOB THAT PAYS OFF	4	148	-0.0210	0.0081	0.0283	0.0070	0.0479	0.0639	0.0865	0.0924	0.0529	0.0026	0.0346
JOB THAT PAYS OFF	5	149	0.0262	0.0220	-0.0035	-0.0480	-0.0140	0.0079	0.0356	0.0903	0.0575	0.0061	-0.0294
JOB THAT DOESNT BUG ME	1	150	-0.1052	-0.0874	-0.1028	-0.0480	-0.2033	-0.1506	-0.1122	-0.0121	-0.0214	0.0194	-0.0432
JOB THAT DOESNT BUG ME	2	151	-0.0950	-0.0865	-0.1333	-0.0766	-0.1314	-0.1524	-0.1044	-0.0821	-0.0712	0.0145	-0.0291
JOB THAT DOESNT BUG ME	3	152	-0.0944	-0.0844	-0.1700	-0.1338	-0.1204	-0.1926	-0.1836	-0.0921	-0.0814	0.0040	-0.0879
JOB THAT DOESNT BUG ME	4	153	-0.0835	-0.0669	-0.1190	-0.1443	-0.0810	-0.1488	-0.1354	-0.1145	-0.0705	0.0191	-0.0269
JOB THAT DOESNT BUG ME	5	154	-0.0815	-0.0525	-0.0856	-0.0745	-0.0410	-0.1034	-0.1089	-0.0776	-0.1301	0.0373	0.0278
AMBITIOUS JOB ATTITUDE	1	155	0.1055	0.0858	0.0960	0.0710	0.2765	0.1987	0.1374	0.0595	0.0141	0.0047	0.1000
AMBITIOUS JOB ATTITUDE	2	156	0.0771	0.0846	0.1405	0.0819	0.1566	0.2264	0.1589	0.1016	0.0700	-0.0024	0.0775
AMBITIOUS JOB ATTITUDE	3	157	0.0771	0.0815	0.1250	0.0947	0.1478	0.2014	0.2146	0.1075	0.0830	-0.0080	0.0948
AMBITIOUS JOB ATTITUDE	4	158	0.0593	0.0628	0.1213	0.1319	0.1008	0.1690	0.1726	0.1579	0.0955	-0.0109	0.0446
AMBITIOUS JOB ATTITUDE	5	159	0.0875	0.0613	0.0700	0.0299	0.0182	0.0891	0.1153	0.1256	0.1492	-0.0236	-0.0453
STATUS ASPIRED OCCUPAT	1	160	0.0442	-0.0336	0.0205	-0.0325	0.1128	0.0453	0.0439	-0.0511	-0.0299	0.1523	0.1897
STATUS ASPIRED OCCUPAT	2	161	0.0358	0.0088	0.0696	0.0362	0.1258	0.0486	0.0617	-0.0669	-0.0422	0.1376	0.2322
STATUS ASPIRED OCCUPAT	3	162	0.0064	-0.0183	0.0341	0.0290	0.0879	0.0276	0.0601	-0.0917	-0.0725	0.1445	0.1935
STATUS ASPIRED OCCUPAT	4	163	0.0516	0.0226	0.0643	0.0403	0.1057	0.0737	0.0783	-0.0638	-0.0467	0.1536	0.2005
STATUS ASPIRED OCCUPAT	5	164	-0.0310	-0.0305	0.0317	-0.0204	0.0833	0.0253	0.0363	-0.0385	-0.0437	0.1128	0.2035
DELINQ BEHAV IN SCHOOL	1	165	-0.1497	-0.1189	-0.1576	-0.0973	-0.1399	-0.1231	-0.1420	-0.1553	-0.0711	-0.1240	-0.1139

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*** OUTPUT CORRELATION MATRIX ***

	VAR	111	112	113	114	115	116	117	118	119	120	121
DELINQ BEHAV IN SCHOOL 2	166	-0.1649	-0.1343	-0.1910	-0.1309	-0.1168	-0.1354	-0.1016	-0.0902	-0.0462	-0.0629	-0.1475
DELINQ BEHAV IN SCHOOL 3	167	-0.1084	-0.1091	-0.2027	-0.1248	-0.1046	-0.1119	-0.1424	-0.0702	-0.0411	-0.0644	-0.1329
SERIOUSNESS OF DELINQ 1	168	-0.1382	-0.1281	-0.1566	-0.0786	-0.1429	-0.0851	-0.0844	-0.1349	-0.0510	-0.1383	-0.1366
SERIOUSNESS OF DELINQ 2	169	-0.0614	-0.1156	-0.1290	-0.1035	-0.1343	-0.1102	-0.0728	-0.0877	-0.0129	-0.0367	-0.1137
SERIOUSNESS OF DELINQ 3	170	-0.1625	-0.0677	-0.1216	-0.1014	-0.0678	-0.0967	-0.1343	-0.0528	-0.0131	-0.0326	-0.0699
SERIOUSNESS OF DELINQ 4	171	-0.0409	-0.0688	-0.0649	-0.0686	-0.0498	-0.0387	-0.0563	-0.0377	-0.0107	-0.1124	-0.0762
SERIOUSNESS OF DELINQ 5	172	-0.0453	-0.0640	-0.0932	-0.0807	-0.0581	-0.0601	-0.0847	-0.0844	-0.0834	-0.0594	-0.0448
INTERPERSONAL AGGRESSN 1	173	-0.1546	-0.1292	-0.1594	-0.1036	-0.1592	-0.1001	-0.1195	-0.1371	-0.0838	-0.1266	-0.1179
INTERPERSONAL AGGRESSN 2	174	-0.0583	-0.0991	-0.1033	-0.0971	-0.1195	-0.1179	-0.0509	-0.0846	-0.0368	-0.0229	-0.0889
INTERPERSONAL AGGRESSN 3	175	-0.0548	-0.0499	-0.0904	-0.0905	-0.0996	-0.1147	-0.1311	-0.0388	-0.0545	-0.0259	-0.0783
INTERPERSONAL AGGRESSN 4	176	-0.0558	-0.0650	-0.0773	-0.0824	-0.0510	-0.0712	-0.0762	-0.0124	-0.0245	-0.1051	-0.0770
INTERPERSONAL AGGRESSN 5	177	-0.0218	-0.0083	-0.0433	-0.0984	-0.0797	-0.0323	-0.0838	-0.0262	-0.0592	-0.0624	-0.0642
THEFT AND VANDALISM 1	178	-0.1335	-0.1444	-0.1482	-0.0591	-0.1079	-0.0703	-0.0824	-0.1399	-0.0593	-0.1397	-0.1193
THEFT AND VANDALISM 2	179	-0.0635	-0.1147	-0.1177	-0.0860	-0.1220	-0.1069	-0.0695	-0.1008	-0.0148	-0.0356	-0.1076
THEFT AND VANDALISM 3	180	-0.0680	-0.0575	-0.1216	-0.0810	-0.0539	-0.0726	-0.1234	-0.0625	-0.0176	-0.0399	-0.0787
THEFT AND VANDALISM 4	181	-0.0362	-0.0696	-0.0675	-0.0719	-0.0248	-0.0153	-0.0371	-0.0668	-0.0202	-0.1084	-0.0772
THEFT AND VANDALISM 5	182	-0.0401	-0.0714	-0.0832	-0.0580	-0.0549	-0.0663	-0.0774	-0.0905	-0.0933	-0.0461	-0.0270
DAILY CIGARETTE USE=1	3 183	-0.0710	-0.0862	-0.1247	-0.0788	-0.0395	-0.0399	-0.0294	-0.0025	0.0003	-0.0928	-0.0836
DAILY CIGARETTE USE=1	4 184	-0.0916	-0.0596	-0.1203	-0.0755	-0.0392	-0.0168	0.0064	0.0117	0.0182	-0.1121	-0.0922
DAILY CIGARETTE USE=1	5 185	-0.0491	-0.0336	-0.0811	-0.0820	-0.0344	-0.0253	-0.0390	0.0017	-0.0352	-0.0883	-0.0743
ALCOHOL USE 1-6	3 186	-0.0319	-0.0498	-0.0724	-0.0577	0.0272	0.0064	-0.0111	-0.0092	-0.0487	-0.0778	-0.0928
ALCOHOL USE 1-6	4 187	0.0071	-0.0295	-0.0440	-0.0351	0.0521	0.0119	0.0042	-0.0261	-0.0374	-0.0605	-0.0483
ALCOHOL USE 1-6	5 188	-0.0164	-0.0359	-0.0214	-0.0465	0.0296	-0.0099	-0.0005	-0.0345	-0.0260	-0.0364	-0.0472
MARIJUANA USE 1-6	3 189	-0.0800	-0.1214	-0.1158	-0.0893	0.0144	-0.0615	-0.1431	-0.2026	-0.1283	-0.0525	-0.0124
MARIJUANA USE 1-6	4 190	-0.0635	-0.0808	-0.0860	-0.0744	0.0322	-0.0216	-0.0909	-0.2287	-0.1702	-0.0527	-0.0235
MARIJUANA USE 1-6	5 191	-0.0358	-0.0560	-0.0510	-0.0413	0.0425	-0.0050	-0.0369	-0.1577	-0.1297	-0.0263	-0.0393
DRUG INITIATION, 1970-1975	3 192	-0.0243	-0.0660	-0.0870	-0.0477	0.0330	-0.0742	-0.1174	-0.1475	-0.1093	-0.0531	-0.0082

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*** OUTPUT CORRELATION MATRIX ***

	VAR	111	112	113	114	115	116	117	118	119	120	121
DRUG USE: AMPH, BARB, LID 4	123	-0.0523	-0.0895	-0.1340	-0.0783	-0.0245	-0.0589	-0.1031	-0.1763	-0.1220	-0.0861	-0.0228
DRUG USE: AMPH, BARB, LID 5	124	-0.0333	-0.0254	.0622	-0.0591	-0.0321	-0.0215	-0.0395	-0.1352	-0.0830	-0.2670	-0.0513
SCHOOL MEAN S.S.L.	1 125	0.0274	-0.0131	0.0749	0.0738	0.0014	0.0178	-0.0047	-0.2672	-0.0920	-0.0446	0.0185
SCHOOL MEAN JUICE TEST 1	126	0.0485	0.0204	0.1046	0.0953	0.0218	0.0212	0.0196	-0.0411	-0.0537	-0.0426	0.0315
SCHOOL MEAN GATE-J	1 127	0.0258	0.0125	0.1109	0.0891	-0.0069	0.0081	0.0007	-0.0277	-0.0409	-0.0713	0.0231
SCHOOL MEAN GATES	1 128	0.0563	0.0332	0.1243	0.1038	0.0207	0.0203	0.0222	-0.0076	-0.0346	-0.0995	0.0106
PARTICIPANT IN 1970=1 4	129	0.0276	0.0220	0.0031	99.9999	0.0351	-0.0230	-0.0316	99.9999	-0.0406	0.0055	0.0275

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*** OUTPUT CORRELATION MATRIX ***

		VAR	122	123	124	125	126	127	128	129	130	131	132
INTEREST IN GOVERNMENT	4	123	0.5104										
INTEREST IN GOVERNMENT	5	124	0.4122	0.4313									
GOVT SHLD END DISCRIM	3	125	0.0808	0.1457	0.0795								
GOVT SHLD END DISCRIM	4	126	0.3917	0.1463	0.0755	0.4085							
GOVT SHLD END DISCRIM	5	127	0.0492	0.1157	0.1098	0.2493	0.2391						
SOCIAL DISTANCE (RACE)	3	128	-0.0707	-0.1346	-0.0635	-0.5167	-0.3632	-0.1857					
SOCIAL DISTANCE (RACE)	4	129	-0.0607	-0.3928	-0.0797	-0.3598	-0.4686	-0.2070	0.6117				
SOCIAL DISTANCE (RACE)	5	130	-0.0838	-0.1132	-0.1546	-0.2703	-0.2505	-0.3761	0.3490	0.4253			
PERCEIVED DISCRIMINATN	3	131	0.0384	0.0832	0.0964	0.2642	0.2034	0.1425	-0.2392	-0.1993	-0.1402		
PERCEIVED DISCRIMINATN	4	132	0.0690	0.1592	0.1442	0.2777	0.3239	0.1998	-0.2547	-0.2923	-0.2984	0.5245	
PERCEIVED DISCRIMINATN	5	133	0.0906	0.1351	0.1707	0.2442	0.2363	0.2796	-0.2338	-0.2596	-0.3193	0.4121	0.5446
VIETNAM DISSENT	3	134	0.0010	0.0188	0.0075	0.0192	0.0389	0.0146	-0.0885	-0.0726	-0.0741	0.1160	0.1343
VIETNAM DISSENT	4	135	0.0767	0.1224	0.1317	0.0777	0.1051	0.0474	-0.1058	-0.1180	-0.0597	0.1387	0.2292
VIETNAM DISSENT	5	136	0.1673	0.1588	0.1825	0.1228	0.1079	0.0713	-0.1181	-0.1325	-0.1476	0.1057	0.2004
PREF MORE MILITARY INFL	3	137	-0.1186	-0.1080	-0.1256	-0.1232	-0.1191	-0.0746	0.1564	0.1404	0.1037	-0.1771	-0.2082
PREF MORE MILITARY INFL	5	138	-0.0877	-0.1190	-0.1041	-0.1450	-0.1769	-0.0934	0.1450	0.1689	0.1378	-0.1605	-0.2223
ABORTION DISAPPROVAL	4	139	-0.0325	-0.1132	-0.1015	-0.0578	-0.0353	-0.0096	0.0056	0.0034	0.0385	-0.0653	-0.0875
ABORTION DISAPPROVAL	5	140	-0.0325	-0.0502	-0.0672	-0.0524	-0.0718	-0.0336	0.0297	0.0611	0.0483	-0.0038	-0.0530
POPULATION CONCERN	4	141	0.0537	0.1460	0.0978	0.1078	0.1476	0.0666	-0.1027	-0.1146	-0.0383	0.0728	0.1226
POPULATION CONCERN	5	142	0.0336	0.0790	0.1040	0.0633	0.0824	0.0620	-0.0759	-0.1106	-0.0496	0.0386	0.0775
IDEAL NUMBER CHILDREN	4	143	-0.0028	-0.0464	-0.0125	0.0195	-0.0217	-0.0182	-0.0613	-0.0297	0.0016	0.0546	0.0075
IDEAL NUMBER CHILDREN	5	144	0.0095	-0.0108	0.0366	-0.0034	-0.0293	-0.0091	-0.0060	-0.0013	-0.0024	0.0064	-0.0474
JOB THAT PAYS OFF	1	145	0.0613	0.1008	0.0791	0.0390	0.0613	0.0262	-0.0537	-0.0170	0.0223	-0.0106	-0.0200
JOB THAT PAYS OFF	2	146	0.0308	0.0698	0.0751	-0.0031	0.0375	0.0265	-0.0017	0.0547	0.0199	0.0047	-0.0116
JOB THAT PAYS OFF	3	147	0.0397	0.0433	0.0307	0.0379	0.0555	0.0276	-0.0047	0.0090	0.0355	0.0155	-0.0191
JOB THAT PAYS OFF	4	148	0.0024	0.0379	0.0568	0.0139	0.0786	0.0209	0.0098	-0.0191	0.0440	0.0449	0.0171
JOB THAT PAYS OFF	5	149	0.0021	0.0253	0.0415	-0.0522	-0.0316	0.0369	0.0646	0.0985	-0.0004	-0.0178	-0.0145

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*** OUTPUT CORRELATION MATRIX ***

	VAR	122	123	124	125	126	127	128	129	130	131	132
JOB THAT DOESN'T BUG ME 1	151	-0.1437	-0.1594	-0.0852	-0.1451	-0.1237	-0.0572	0.1728	0.1852	0.1173	-0.1249	-0.0933
JOB THAT DOESN'T BUG ME 2	151	-0.0273	-0.0640	-0.0589	-0.1819	-0.1516	-0.0553	0.1895	0.2201	0.1160	-0.0787	-0.0925
JOB THAT DOESN'T BUG ME 3	152	-0.1710	-0.1918	-0.0644	-0.2037	-0.1773	-0.0951	0.2296	0.2221	0.1407	-0.0582	-0.0999
JOB THAT DOESN'T BUG ME 4	153	-0.0176	-0.0978	-0.0646	-0.2133	-0.2321	-0.1121	0.2382	0.2959	0.1450	-0.0726	-0.0899
JOB THAT DOESN'T BUG ME 5	154	0.0745	0.0123	0.0468	-0.1136	-0.1265	-0.0973	0.1395	0.1795	0.1434	-0.0241	-0.0217
AMBITIOUS JOB ATTITUDE 1	155	0.0762	0.1156	0.1265	0.1935	0.1492	0.0646	-0.1900	-0.1795	-0.0942	0.0888	0.0733
AMBITIOUS JOB ATTITUDE 2	156	0.0485	0.1140	0.1000	0.1645	0.1610	0.0650	-0.1757	-0.1701	-0.0959	0.0741	0.0770
AMBITIOUS JOB ATTITUDE 3	157	0.0855	0.0963	0.0712	0.1879	0.1799	0.0899	-0.1910	-0.1764	-0.0913	0.0596	0.0675
AMBITIOUS JOB ATTITUDE 4	158	0.0351	0.1119	0.0931	0.1995	0.2550	0.1135	-0.2074	-0.2691	-0.1035	0.0860	0.0891
AMBITIOUS JOB ATTITUDE 5	159	-0.0470	0.0069	-0.0143	0.0608	0.0839	0.1026	-0.0757	-0.0853	-0.1243	0.0081	0.0047
STATUS ASPIRED OCCUPAT 1	160	0.1343	0.1461	0.2053	0.1310	0.1376	0.0905	-0.0821	-0.1522	-0.1197	0.0986	0.1618
STATUS ASPIRED OCCUPAT 2	161	0.1463	0.1746	0.2444	0.1339	0.1752	0.0754	-0.1108	-0.1765	-0.1327	0.0868	0.1874
STATUS ASPIRED OCCUPAT 3	162	0.2098	0.2043	0.2703	0.1541	0.1195	0.0640	-0.1490	-0.1939	-0.1106	0.0683	0.1838
STATUS ASPIRED OCCUPAT 4	163	0.2233	0.2302	0.2862	0.1452	0.1693	0.0880	-0.1290	-0.1816	-0.1705	0.1064	0.2128
STATUS ASPIRED OCCUPAT 5	164	0.1757	0.1817	0.2699	0.1403	0.1165	0.0597	-0.1064	-0.1410	-0.0856	0.0669	0.1430
DELINQ BEHAV IN SCHOOL 1	165	-0.0703	-0.0442	-0.0429	-0.0595	-0.0818	0.0027	0.0858	0.0697	0.0420	-0.0428	-0.0929
DELINQ BEHAV IN SCHOOL 2	166	-0.0639	-0.0508	-0.0397	-0.1225	-0.1065	-0.0377	0.1437	0.1597	0.0497	-0.0179	-0.0556
DELINQ BEHAV IN SCHOOL 3	167	-0.1356	-0.0610	-0.0729	-0.1259	-0.1045	-0.0290	0.1787	0.1472	0.0238	0.0052	-0.0238
SERIOUSNESS OF DELINQ 1	169	-0.0474	-0.0107	-0.0250	-0.0215	-0.0362	-0.0072	0.0329	-0.0116	0.0337	0.0036	-0.0007
SERIOUSNESS OF DELINQ 2	169	-0.0512	-0.0305	-0.0126	-0.0487	-0.0824	-0.0104	0.0814	0.0826	0.0250	-0.0226	0.0241
SERIOUSNESS OF DELINQ 3	171	-0.0665	-0.0599	-0.0479	-0.0484	-0.0747	-0.0032	0.1642	0.0978	-0.0009	-0.0026	0.0207
SERIOUSNESS OF DELINQ 4	171	-0.1066	-0.0611	-0.0562	-0.0724	-0.0789	-0.0172	0.1209	0.1113	0.0446	-0.0488	-0.0157
SERIOUSNESS OF DELINQ 5	172	-0.0738	-0.0623	-0.0825	-0.0792	-0.0546	-0.0573	0.0569	-0.0038	0.0455	0.0108	-0.0130
INTERPERSONAL AGGRESSION 1	173	-0.0631	-0.0264	-0.0169	-0.0577	-0.0365	-0.0091	0.0655	0.0362	0.0534	-0.0227	-0.0444
INTERPERSONAL AGGRESSION 2	174	-0.0158	-0.0354	-0.0195	-0.0638	-0.1124	-0.0212	0.1037	0.1357	0.0504	-0.0261	-0.0371
INTERPERSONAL AGGRESSION 3	175	-0.0732	-0.0671	-0.0620	-0.1128	-0.1306	-0.0345	0.1902	0.1564	0.0524	-0.0200	-0.0346
INTERPERSONAL AGGRESSION 4	176	-0.0755	-0.0359	-0.0919	-0.1149	-0.1341	-0.0467	0.1514	0.1884	0.1003	-0.0607	-0.0818

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*** OUTPUT CORRELATION MATRIX ***

		VAR	122	123	124	125	126	127	128	129	130	131	132
INTERPERSONAL AGGRESSION	5	177	-0.1907	-0.0571	-0.1044	-0.0838	-0.0952	-0.0681	0.0450	0.0419	0.1251	0.0059	-0.0626
THEFT AND VANDALISM	1	178	-0.0919	-0.0076	.0217	0.0033	0.0094	0.0047	0.0335	-0.0322	0.0315	-0.0011	0.0201
THEFT AND VANDALISM	2	179	-0.0568	-0.0223	-0.0084	-0.0369	-0.0626	-0.0116	0.0665	0.0699	0.0323	-0.0102	0.0538
THEFT AND VANDALISM	3	180	-0.0697	-0.0531	-0.0404	-0.0860	-0.0492	-0.0124	0.1571	0.0865	-0.0911	0.0056	0.0367
THEFT AND VANDALISM	4	181	-0.1127	-0.0651	-0.0382	-0.0558	-0.0714	-0.0068	0.1037	0.0860	0.0280	-0.0454	0.0053
THEFT AND VANDALISM	5	182	-0.0548	-0.0610	-0.0713	-0.0803	-0.0551	-0.0515	0.0714	0.0078	0.0382	0.0114	-0.0120
DAILY CIGARETTE USE=1	3	183	-0.1146	-0.0496	-0.0687	-0.0819	-0.0535	-0.0369	0.0767	0.0546	-0.0031	-0.0074	-0.0310
DAILY CIGARETTE USE=1	4	184	-0.0806	-0.0113	-0.0535	-0.0602	-0.0290	-0.0491	0.0639	0.0481	0.0112	-0.0055	-0.0095
DAILY CIGARETTE USE=1	5	185	-0.0627	-0.0146	-0.0416	-0.0274	-0.0008	0.0148	0.0642	0.0276	-0.0182	0.0125	-0.0121
ALCOHOL USE 1-6	3	186	-0.1164	-0.0470	-0.0263	-0.0688	-0.0137	-0.0351	0.1172	0.0748	0.0621	-0.0608	-0.0388
ALCOHOL USE 1-6	4	187	-0.0520	-0.0277	-0.0356	-0.0256	0.0233	-0.0296	0.0778	0.0197	0.0614	-0.0108	-0.0051
ALCOHOL USE 1-6	5	188	-0.0586	-0.0241	-0.0053	-0.0054	0.0401	0.0258	0.0245	-0.0272	-0.0287	0.0537	0.0435
MARIJUANA USE 1-6	3	189	0.0040	0.0292	0.0671	-0.0098	0.0342	0.0088	-0.0072	-0.0138	-0.0257	0.0726	0.1056
MARIJUANA USE 1-6	4	190	0.0268	0.0634	0.0616	0.0470	0.1075	0.0415	-0.0735	-0.1099	-0.0883	0.1445	0.1961
MARIJUANA USE 1-6	5	191	-0.0346	0.0159	0.0601	0.0402	0.0973	0.0420	-0.0576	-0.0861	-0.1129	0.0788	0.0706
DRUG USE: AMPH, BARB, LSD	3	192	0.0297	0.0182	0.0580	0.0202	-0.0185	0.0173	-0.0261	0.0245	-0.0520	0.0369	0.0482
DRUG USE: AMPH, BARB, LSD	4	193	-0.0048	0.0279	0.0078	0.0224	0.0294	0.0546	-0.0285	-0.0114	-0.0766	0.0662	0.1172
DRUG USE: AMPH, BARB, LSD	5	194	-0.0141	-0.0035	0.0035	0.0200	0.0550	0.0143	-0.0346	-0.0643	-0.0578	0.0690	0.0409
SCHOOL MEAN S.E.L.	1	195	0.0118	0.0362	0.0744	0.1219	0.1399	-0.0177	-0.1324	-0.1882	-0.0529	0.1474	0.1435
SCHOOL MEAN QUICK TEST	1	196	0.0206	0.0573	0.0737	0.0782	0.0613	-0.0311	-0.1047	-0.1297	-0.0025	0.0819	0.0784
SCHOOL MEAN HARD-J	1	197	0.0049	0.0563	0.0581	0.0958	0.0641	-0.0318	-0.0933	-0.1159	0.0038	0.0870	0.0777
SCHOOL MEAN GAMES	1	198	-0.0224	0.0322	0.0396	0.0844	0.0635	-0.0432	-0.0909	-0.1281	0.0033	0.0807	0.0716
PARTICIPANT IN 1970-1	4	199	0.0060	99.9999	0.0258	0.0264	99.9999	0.0140	-0.0680	99.9999	-0.0049	0.0225	99.9999

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*** OUTPUT CORRELATION MATRIX ***

		VAR	133	134	135	136	137	138	139	140	141	142	143
VIETNAM DISSENT	3	134	0.1152										
VIETNAM DISSENT	4	135	0.2050	0.5685									
VIETNAM DISSENT	5	136	0.2459	0.4067	0.5486								
PREF MORE MILITARY INFL	3	137	-0.2229	-0.4145	-0.3752	-0.3353							
PREF MORE MILITARY INFL	5	138	-0.2462	-0.2805	-0.4327	-0.5285	0.3846						
ABORTION DISAPPROVAL	4	139	-0.0719	-0.1071	-0.1992	-0.2290	0.1349	0.2347					
ABORTION DISAPPROVAL	5	140	-0.0461	-0.0648	-0.1130	-0.2200	0.0978	0.2191	0.3843				
POPULATION CONCERN	4	141	0.0973	0.0656	0.1420	0.2153	-0.1344	-0.2244	-0.2411	-0.1813			
POPULATION CONCERN	5	142	0.0659	0.0656	0.1096	0.1615	-0.1426	-0.1850	-0.1586	-0.2426	0.4738		
IDEAL NUMBER CHILDREN	4	143	0.0313	-0.0649	-0.0603	-0.0762	0.0532	0.0643	0.1575	0.1528	-0.3311	-0.2216	
IDEAL NUMBER CHILDREN	5	144	-0.0196	-0.0948	-0.0582	-0.0876	0.0828	0.1072	0.1260	0.2500	-0.2629	-0.4231	0.3896
JOB THAT PAYS OFF	1	145	0.0014	-0.0797	0.0044	-0.0029	0.0245	-0.0247	-0.0027	-0.0561	-0.0364	0.0595	0.0108
JOB THAT PAYS OFF	2	146	0.0028	-0.1148	-0.0331	-0.0313	0.0517	0.0089	-0.0225	-0.0713	0.0738	0.0353	-0.0295
JOB THAT PAYS OFF	3	147	-0.0289	-0.1430	-0.1302	-0.0597	0.0933	0.0401	0.0572	-0.0230	0.0046	0.0521	0.0051
JOB THAT PAYS OFF	4	148	-0.0164	-0.1304	-0.1658	-0.1034	0.1035	0.1206	0.0594	0.0053	0.0211	-0.0142	0.0449
JOB THAT PAYS OFF	5	149	-0.0310	-0.1013	-0.1522	-0.1628	0.0895	0.1990	0.1107	0.0551	-0.1210	-0.0909	0.0738
JOB THAT DOESNT BUG ME	1	150	-0.1205	-0.0290	-0.0714	-0.0857	0.0455	0.1076	0.0158	0.0430	-0.1477	-0.1140	0.0427
JOB THAT DOESNT BUG ME	2	151	-0.0812	-0.0108	-0.0265	-0.0590	0.0048	0.0777	-0.0402	-0.0210	-0.0855	-0.0502	-0.0074
JOB THAT DOESNT BUG ME	3	152	-0.0949	0.0231	-0.0044	-0.0543	0.0291	0.0946	-0.0414	0.0086	-0.1262	-0.0896	-0.0117
JOB THAT DOESNT BUG ME	4	153	-0.0715	0.0359	0.0122	-0.0209	0.0109	0.0439	-0.0527	-0.0247	-0.1194	-0.0650	0.0009
JOB THAT DOESNT BUG ME	5	154	0.0074	0.0391	0.0577	0.0651	-0.0599	-0.0782	-0.0496	-0.0839	-0.0217	-0.0099	0.0063
AMBITIOUS JOB ATTITUDE	1	155	0.1074	-0.0227	0.0671	0.0728	-0.0273	-0.1139	-0.0160	-0.0729	0.1562	0.1375	-0.0323
AMBITIOUS JOB ATTITUDE	2	156	0.0755	-0.0611	0.0030	0.0329	0.0260	-0.0660	0.0236	-0.0239	0.1229	0.0674	-0.0103
AMBITIOUS JOB ATTITUDE	3	157	0.0596	-0.1102	-0.0785	0.0093	0.0400	-0.0519	0.0686	-0.0197	0.1052	0.1026	0.0160
AMBITIOUS JOB ATTITUDE	4	158	0.0522	-0.1190	-0.1206	-0.0498	0.0534	0.0395	0.0830	0.0229	0.1158	0.0492	0.0268
AMBITIOUS JOB ATTITUDE	5	159	-0.0277	-0.1055	-0.1552	-0.1655	0.1112	0.1996	0.1199	0.1069	-0.0654	-0.0474	0.0476
STATUS ASPIRED OCCUPAT	1	160	0.1281	0.0615	0.1263	0.2175	-0.1176	-0.2682	-0.2061	-0.1711	0.1813	0.1289	-0.0418

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*** OUTPUT CORRELATION MATRIX ***

	VAR	133	134	135	136	137	138	139	140	141	142	143	
STATUS ASPIRED OCCUPAT 2	161	0.1652	0.0493	0.1775	0.2759	-0.1850	-0.2845	-0.2156	-0.1558	0.2199	0.1627	-0.0846	
STATUS ASPIRED OCCUPAT 3	162	0.1589	0.0577	0.1976	0.2714	-0.1426	-0.2700	-0.2014	-0.1477	0.2046	0.1769	-0.0255	
STATUS ASPIRED OCCUPAT 4	163	0.2295	0.0684	0.1830	0.2856	-0.1677	-0.3016	-0.1515	-0.1754	0.2011	0.1278	-0.0132	
STATUS ASPIRED OCCUPAT 5	164	0.1610	0.0383	0.1491	0.2503	-0.1031	-0.2414	-0.1363	-0.1375	0.1502	0.1571	-0.0271	
DELINQ BEHAV IN SCHOOL 1	165	-0.0748	0.0143	0.0496	0.0354	0.0400	0.0436	0.0261	-0.0214	-0.1210	-0.0371	0.0016	
DELINQ BEHAV IN SCHOOL 2	166	-0.0484	0.0360	0.0009	-0.0170	0.0191	0.0881	0.0169	0.0211	-0.1324	-0.0676	0.0050	
DELINQ BEHAV IN SCHOOL 3	167	-0.0023	0.0380	0.0242	-0.0214	0.0062	0.0460	0.0382	0.0557	-0.1586	-0.1116	0.0164	
SERIOUSNESS OF DELINQ 1	168	-0.0207	0.0284	0.0867	0.0670	0.0027	-0.0152	-0.0776	-0.0782	-0.0275	-0.0086	0.0207	
SERIOUSNESS OF DELINQ 2	169	-0.0218	0.0170	0.0002	0.0062	0.0276	0.0355	-0.0385	-0.0220	-0.0733	-0.0419	-0.0021	
SERIOUSNESS OF DELINQ 3	170	0.0170	0.0347	0.0272	0.0073	-0.0296	-0.0015	-0.0072	0.0117	-0.1437	-0.0766	0.0473	
SERIOUSNESS OF DELINQ 4	171	-0.0328	-0.0472	0.0304	-0.0193	0.0741	-0.0141	-0.0634	-0.0643	-0.0610	-0.0269	-0.0151	
SERIOUSNESS OF DELINQ 5	172	-0.0162	0.0197	0.0551	0.0516	0.0116	-0.0298	-0.1037	-0.1069	-0.0315	-0.0059	0.0169	
INTERPERSONAL AGGRESSION 1	173	-0.0495	0.0204	0.0603	0.0524	0.0022	0.0214	-0.0253	-0.0381	-0.0867	-0.0013	0.0010	
INTERPERSONAL AGGRESSION 2	174	-0.0401	0.0044	-0.0231	-0.0431	0.0372	0.0869	-0.0024	0.0197	-0.1167	-0.0782	-0.0078	
INTERPERSONAL AGGRESSION 3	175	-0.0139	-0.0208	-0.0187	-0.0472	0.0120	0.0669	0.0688	0.0614	-0.1615	-0.1209	0.0277	
INTERPERSONAL AGGRESSION 4	176	-0.0698	-0.0724	-0.0414	-0.0847	0.0636	0.0894	-0.0114	-0.0142	-0.1065	-0.0822	-0.0170	
INTERPERSONAL AGGRESSION 5	177	-0.0785	-0.0280	-0.0024	-0.0437	0.0711	0.0887	0.0059	-0.0054	-0.0856	-0.0694	0.0232	
THEFT AND VANDALISM 1	178	-0.0270	0.0447	0.1198	0.1008	-0.0251	-0.0615	-0.0979	-0.1081	0.0078	0.0085	0.0016	
THEFT AND VANDALISM 2	179	0.0019	0.0239	0.0271	0.0433	0.0126	-0.0025	-0.0549	-0.0311	-0.0345	-0.0675	-0.0041	
THEFT AND VANDALISM 3	180	0.0101	0.0324	0.0300	0.0313	-0.0354	-0.0283	-0.0308	-0.0104	-0.1032	-0.0330	0.0258	
THEFT AND VANDALISM 4	181	-0.0113	-0.0310	0.0518	0.0081	0.0454	-0.0526	-0.0626	-0.0873	-0.0444	0.0059	-0.0110	
THEFT AND VANDALISM 5	182	-0.0047	0.0275	0.0497	0.0707	-0.0097	-0.0588	-0.1179	-0.1212	-0.0101	-0.0002	0.0015	
DAILY CIGARETTE USE#1	3	183	-0.0494	0.0261	-0.0029	-0.0637	0.0038	0.0921	0.0231	0.0327	-0.1424	-0.0936	-0.0065
DAILY CIGARETTE USE#1	4	184	-0.0603	0.0051	-0.0200	-0.0648	0.0525	0.0939	0.0131	0.0059	-0.1176	-0.0975	-0.0064
DAILY CIGARETTE USE#1	5	185	-0.0362	0.0300	-0.0003	-0.0349	0.0524	0.0923	0.0221	-0.0014	-0.1072	-0.1011	-0.0454
ALCOHOL USE 1-6	3	186	-0.0724	-0.0135	-0.0035	-0.0104	0.0543	0.0194	-0.0339	-0.0892	-0.1079	-0.0306	-0.0194
ALCOHOL USE 1-6	4	187	-0.0529	0.0004	0.0211	0.0098	0.0085	0.0041	-0.1027	-0.1676	-0.0617	-0.0137	-0.0153

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*** OUTPUT CORRELATION MATRIX ***

		VAR	133	134	135	136	137	138	139	140	141	142	143
ALCOHOL USE 1-6	5	134	0.0309	0.0483	0.0524	0.0941	-0.0390	-0.0201	-0.0556	-0.1538	-0.0176	-0.0331	0.0108
MARIJUANA USE 1-6	3	149	0.1054	0.1735	.2554	0.1660	-0.1535	-0.1589	-0.1172	-0.1201	0.0040	0.0186	-0.0178
MARIJUANA USE 1-6	4	130	0.1586	0.1833	0.3419	0.2603	-0.2008	-0.2477	-0.2085	-0.1861	0.0695	0.0965	-0.0829
MARIJUANA USE 1-6	5	141	0.0812	0.1467	0.2018	0.2704	-0.1189	-0.2607	-0.1680	-0.2655	0.0384	0.0716	-0.0052
DRUG USE: AMPS, MARI, LSD 3	192	0.0466	0.1176	0.1276	0.0918	-0.0823	-0.0791	-0.0840	-0.0640	-0.0261	0.0003	-0.0369	
DRUG USE: AMPS, MARI, LSD 4	193	0.0979	0.0924	0.1643	0.1132	-0.0673	-0.0830	-0.1178	-0.1261	0.0082	0.0444	-0.0246	
DRUG USE: AMPS, MARI, LSD 5	194	0.0465	0.0723	0.1373	0.1748	-0.0797	-0.1548	-0.1418	-0.1851	0.0307	0.0721	0.0084	
SCHOOL MEAN S.E.L.	1	195	0.1204	0.1122	0.2006	0.1691	-0.1597	-0.2148	-0.1565	-0.1532	0.1512	0.1298	-0.0256
SCHOOL MEAN QUICK TEST	1	196	0.0261	0.0572	0.1225	0.1217	-0.0835	-0.1524	-0.1549	-0.1645	0.1700	0.2056	-0.0393
SCHOOL MEAN GATB-J	1	197	0.0294	0.0541	0.1043	0.1146	-0.0726	-0.1519	-0.1489	-0.1546	0.1620	0.2040	-0.0632
SCHOOL MEAN GATBS	1	199	-0.0011	0.0361	0.0771	0.0926	-0.0546	-0.1234	-0.1360	-0.1502	0.1682	0.2098	-0.0733
PARTICIPANT IN 1970=1	4	199	0.0316	0.0340	99.9999	0.0038	-0.0161	-0.0312	99.9999	-0.0592	99.9999	0.0910	99.9999

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*** QUANTILE CORRELATION MATRIX ***

		VAR	144	145	146	147	148	149	150	151	152	153	154
JOB THAT PAYS OFF	1	145	-0.0093										
JOB THAT PAYS OFF	2	146	-0.0209	0.3542									
JOB THAT PAYS OFF	3	147	-0.0614	0.2656	0.4123								
JOB THAT PAYS OFF	4	148	0.0056	0.2022	0.3008	0.4170							
JOB THAT PAYS OFF	5	149	0.0170	0.1204	0.2370	0.2655	0.3550						
JOB THAT DOESNT BUG ME	1	150	0.0437	0.1523	0.1243	0.0944	0.1018	0.1794					
JOB THAT DOESNT BUG ME	2	151	-0.0221	0.0256	0.1718	0.1046	0.0939	0.1127	0.4846				
JOB THAT DOESNT BUG ME	3	152	0.0326	-0.0033	0.0180	0.0541	0.0357	0.1309	0.4317	0.5621			
JOB THAT DOESNT BUG ME	4	153	-0.0038	-0.0173	0.0320	0.0818	0.1659	0.1812	0.3672	0.4930	0.5500		
JOB THAT DOESNT BUG ME	5	154	0.0107	0.0269	0.0476	0.0161	-0.0013	0.1365	0.2524	0.3417	0.3925	0.3988	
AMBITIOUS JOB ATTITUDE	1	155	-0.0458	0.4616	0.0982	0.0743	0.0268	-0.0911	-0.8095	-0.4289	-0.3939	-0.3447	-0.2126
AMBITIOUS JOB ATTITUDE	2	156	0.0073	0.1874	0.4485	0.1509	0.0962	0.0369	-0.3679	-0.8072	-0.5039	-0.4333	-0.2854
AMBITIOUS JOB ATTITUDE	3	157	-0.0620	0.1635	0.2406	0.5762	0.2268	0.0551	-0.2946	-0.4027	-0.7900	-0.4082	-0.3132
AMBITIOUS JOB ATTITUDE	4	158	0.0038	0.1476	0.1643	0.1920	0.4998	0.0710	-0.2537	-0.3733	-0.4632	-0.7763	-0.3504
AMBITIOUS JOB ATTITUDE	5	159	0.0018	0.0490	0.1122	0.1637	0.2426	0.5615	-0.0911	-0.2144	-0.2412	-0.2134	-0.7453
STATUS ASPIRED OCCUPAT	1	160	-0.0278	0.1491	0.1016	0.0301	0.0044	-0.0546	-0.1335	-0.0555	-0.0826	-0.0739	0.0542
STATUS ASPIRED OCCUPAT	2	161	-0.0755	0.1007	0.0775	0.0300	-0.0004	-0.0749	-0.1089	-0.0285	-0.0716	-0.0440	0.0663
STATUS ASPIRED OCCUPAT	3	162	-0.0358	0.1494	0.0756	0.0424	-0.0345	-0.0877	-0.1728	-0.0592	-0.0734	-0.0781	0.0575
STATUS ASPIRED OCCUPAT	4	163	-0.0247	0.1166	0.0945	0.0628	-0.0159	-0.0607	-0.1742	-0.0601	-0.0977	-0.0667	0.0738
STATUS ASPIRED OCCUPAT	5	164	-0.0218	0.0997	0.0899	0.0186	-0.1049	-0.0313	-0.1476	-0.0676	-0.0882	-0.0408	0.1327
DELINQ BEHAV IN SCHOOL	1	165	-0.0118	-0.1518	-0.0182	-0.0083	-0.0329	0.0075	0.1562	0.0809	0.0997	0.0744	0.0259
DELINQ BEHAV IN SCHOOL	2	166	-0.0327	-0.0734	-0.0309	-0.0414	-0.0394	0.0528	0.2050	0.1602	0.1576	0.0790	0.0385
DELINQ BEHAV IN SCHOOL	3	167	0.0253	-0.0203	-0.0144	-0.0497	-0.0078	0.0924	0.2012	0.1113	0.1859	0.1158	0.0329
SERIOUSNESS OF DELINQ	1	168	-0.0020	-0.1137	-0.0120	-0.0107	-0.0636	-0.0417	0.1204	0.0634	0.0563	0.0159	-0.0107
SERIOUSNESS OF DELINQ	2	169	-0.0172	-0.0400	-0.0560	-0.0525	-0.0859	-0.0092	0.1640	0.1562	0.1202	0.0512	0.0412
SERIOUSNESS OF DELINQ	3	170	-0.0309	-0.0450	-0.0657	-0.1251	-0.0333	0.0647	0.1397	0.1132	0.1700	0.1179	0.0297
SERIOUSNESS OF DELINQ	4	171	-0.0189	-0.0086	0.0579	-0.0080	-0.0424	0.0192	0.0841	0.0932	0.1350	0.0851	0.0383

C-76

504

*** OUTPUT CORRELATION MATRIX ***

		VAR	144	145	146	147	148	149	150	151	152	153	154
SERIOUSNESS OF DELINQ	5	172	0.0002	-0.0894	-0.0320	-0.0076	-0.0198	-0.0354	0.0525	0.0272	0.0839	0.0555	0.0598
INTERPERSONAL AGGRESSION	1	173	-0.0073	-0.1230	0.0103	0.0100	-0.0301	0.0062	0.1512	0.0609	0.0680	0.0446	0.0054
INTERPERSONAL AGGRESSION	2	174	0.0073	-0.0442	-0.0270	-0.0203	-0.0299	0.0171	0.1879	0.1930	0.1531	0.0968	0.0403
INTERPERSONAL AGGRESSION	3	175	0.0696	-0.0393	-0.0455	-0.1089	0.0013	0.0932	0.2020	0.1120	0.1975	0.1695	0.0565
INTERPERSONAL AGGRESSION	4	176	0.0211	-0.0300	0.0550	-0.0139	-0.0206	0.0604	0.1240	0.0643	0.1403	0.1247	0.0706
INTERPERSONAL AGGRESSION	5	177	0.0541	-0.1027	-0.0106	0.0098	0.0069	0.0301	0.0812	0.0145	0.0952	0.0448	0.0514
THEFT AND VANDALISM	1	178	-0.0126	-0.1078	-0.0227	-0.0322	-0.0778	-0.0789	0.1027	0.0584	0.0421	-0.0076	-0.0087
THEFT AND VANDALISM	2	179	-0.0435	-0.0375	-0.0492	-0.0681	-0.1063	-0.0369	0.1541	0.1394	0.1192	0.0499	0.0370
THEFT AND VANDALISM	3	180	0.0044	-0.0317	-0.0562	-0.1133	-0.0430	0.0336	0.1261	0.1163	0.1701	0.0996	0.0300
THEFT AND VANDALISM	4	181	-0.0421	0.0006	0.0588	-0.0056	-0.0532	0.0064	0.0661	0.0920	0.1219	0.0677	0.0346
THEFT AND VANDALISM	5	182	-0.0097	-0.0775	-0.0307	-0.0208	-0.0389	-0.0674	0.0401	0.0344	0.0787	0.0519	0.0777
DAILY CIGARETTE USE=1	3	183	-0.0111	-0.0623	0.0329	0.0178	0.0429	0.0905	0.0847	0.0085	-0.0048	-0.0407	-0.0660
DAILY CIGARETTE USE=1	4	184	-0.0046	-0.0442	0.0275	0.0169	0.0321	0.0867	0.0830	-0.0025	0.0104	-0.0384	-0.0441
DAILY CIGARETTE USE=1	5	185	-0.0232	-0.0423	-0.0015	-0.0211	0.0503	0.1136	0.0669	0.0054	0.0046	0.0001	-0.0641
ALCOHOL USE 1-6	3	186	-0.0348	0.0054	0.0714	0.0113	0.0251	0.0631	0.0729	0.0240	0.0793	0.0244	-0.0314
ALCOHOL USE 1-6	4	187	-0.0685	0.0109	0.0583	0.0101	0.0424	0.0585	0.0345	0.0163	0.0493	0.0250	0.0066
ALCOHOL USE 1-6	5	188	-0.0146	0.0074	0.0354	0.0262	0.0434	0.0340	0.0320	0.0434	0.0305	0.0088	-0.0020
MARIJUANA USE 1-6	3	189	-0.0409	-0.0363	0.0172	-0.0533	-0.0834	-0.0267	0.0080	0.0119	0.0399	0.0132	0.0108
MARIJUANA USE 1-6	4	190	-0.1072	-0.0336	0.0439	-0.0544	-0.1014	-0.0537	-0.0260	0.0093	0.0074	-0.0229	0.0087
MARIJUANA USE 1-6	5	191	-0.0654	-0.0594	0.0024	-0.0204	-0.0273	-0.0837	-0.0373	0.0332	0.0152	0.0270	0.0598
DRUG USE: AMPH, BATH, LTD	3	192	-0.0194	-0.0281	0.0035	-0.0668	-0.1254	-0.0171	0.0010	0.0145	0.0368	0.0023	0.0342
DRUG USE: AMPH, BATH, LTD	4	193	-0.0044	-0.0533	0.0015	-0.0637	-0.1772	-0.0410	-0.0161	0.0173	0.0316	-0.0111	0.0240
DRUG USE: AMPH, BATH, LTD	5	194	-0.0439	-0.0253	0.0162	-0.0319	-0.0099	-0.0718	-0.0558	-0.0140	0.0134	-0.0027	0.0324
SCHOOL MEAN S.E.L.	1	195	-0.0602	-0.0553	-0.0530	-0.0507	-0.0175	-0.1555	-0.1861	-0.1650	-0.1666	-0.1778	-0.1201
SCHOOL MEAN QUICK TEST	1	196	-0.1078	0.0482	0.0181	0.0008	0.0268	-0.1054	-0.1688	-0.1595	-0.1423	-0.1351	-0.1207
SCHOOL MEAN BATH-J	1	197	-0.1132	0.0619	0.0017	0.0066	0.0183	-0.1058	-0.1969	-0.1570	-0.1783	-0.1709	-0.1211
SCHOOL MEAN GATES	1	198	-0.1312	0.0629	0.0073	0.0236	0.0407	-0.1235	-0.2135	-0.1832	-0.1913	-0.1630	-0.1568

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*** OUTPUT CORRELATION MATRIX ***

	VAR	144	145	146	147	148	149	150	151	152	153	154	
PARTICIPANT IN 1970=1	4	1.00	-0.1546	0.0646	0.0375	0.0444	99.9999	-0.0093	-0.0429	-0.0303	-0.0321	99.9999	0.0474

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567

568

*** OUTPUT CORRELATION MATRIX ***

	VAR	155	156	157	158	159	160	161	162	163	164	165
AMBITIOUS JOB ATTITUDE 2	156	0.3413										
AMBITIOUS JOB ATTITUDE 3	157	0.3568	0.5142									
AMBITIOUS JOB ATTITUDE 4	158	0.3086	0.4336	0.4940								
AMBITIOUS JOB ATTITUDE 5	159	0.1132	0.2534	0.2876	0.3313							
STATUS ASPIRED OCCUPAT 1	160	0.2582	0.1592	0.0833	0.0670	-0.0840						
STATUS ASPIRED OCCUPAT 2	161	0.1590	0.0714	0.0768	0.0373	-0.1166	0.6366					
STATUS ASPIRED OCCUPAT 3	162	0.2421	0.0990	0.0850	0.0490	-0.1084	0.5746	0.6774				
STATUS ASPIRED OCCUPAT 4	163	0.2295	0.1112	0.1155	0.0474	-0.1033	0.5017	0.5897	0.6461			
STATUS ASPIRED OCCUPAT 5	164	0.1938	0.1159	0.0827	0.0299	-0.1363	0.4538	0.4816	0.4972	0.5881		
DELINQ BEHAV IN SCHOOL 1	165	-0.2332	-0.0861	-0.0876	-0.0872	-0.0179	-0.2104	-0.1992	-0.1920	-0.2361	-0.1339	
DELINQ BEHAV IN SCHOOL 2	166	-0.2334	-0.1660	-0.1588	-0.0902	0.0016	-0.2051	-0.2355	-0.2098	-0.2326	-0.1585	0.6139
DELINQ BEHAV IN SCHOOL 3	167	-0.1947	-0.1121	-0.1677	-0.1103	0.0327	-0.1481	-0.2243	-0.2320	-0.2283	-0.1711	0.4635
SERIOUSNESS OF DELINQ 1	168	-0.1778	-0.0658	-0.0592	-0.0549	-0.0219	-0.1034	-0.0977	-0.0754	-0.1303	-0.0834	0.6656
SERIOUSNESS OF DELINQ 2	169	-0.1746	-0.1778	-0.1368	-0.0933	-0.0429	-0.0660	-0.1035	-0.0743	-0.1195	-0.0852	0.4039
SERIOUSNESS OF DELINQ 3	170	-0.1568	-0.1445	-0.2200	-0.1256	0.0167	-0.0443	-0.1024	-0.1308	-0.1156	-0.0983	0.3022
SERIOUSNESS OF DELINQ 4	171	-0.1830	-0.0524	-0.1185	-0.1062	-0.0196	-0.0536	-0.0551	-0.0580	-0.1336	-0.0594	0.2999
SERIOUSNESS OF DELINQ 5	172	-0.1735	-0.0466	-0.0768	-0.0640	-0.0746	-0.0584	-0.0572	-0.0957	-0.0781	-0.0529	0.2339
INTERPERSONAL AGGRESSION 1	173	-0.2111	-0.0449	-0.0506	-0.0591	-0.0033	-0.1641	-0.1624	-0.1555	-0.1872	-0.1255	0.8114
INTERPERSONAL AGGRESSION 2	174	-0.2016	-0.1938	-0.1420	-0.0951	-0.0251	-0.1368	-0.1486	-0.0986	-0.1563	-0.0743	0.3950
INTERPERSONAL AGGRESSION 3	175	-0.2108	-0.1311	-0.2329	-0.1508	0.0134	-0.1490	-0.1724	-0.1975	-0.1645	-0.1384	0.3351
INTERPERSONAL AGGRESSION 4	176	-0.1317	-0.0275	-0.1250	-0.1263	-0.0201	-0.1529	-0.1670	-0.1396	-0.2108	-0.1101	0.3226
INTERPERSONAL AGGRESSION 5	177	-0.1374	-0.0225	-0.0722	-0.0385	-0.0254	-0.1569	-0.1245	-0.1498	-0.1352	-0.0938	0.2432
THEFT AND VANDALISM 1	178	-0.1589	-0.0694	-0.0561	-0.0443	-0.0490	-0.0506	-0.0642	-0.0377	-0.1091	-0.0451	0.6417
THEFT AND VANDALISM 2	179	-0.1664	-0.1580	-0.1455	-0.1062	-0.0599	-0.0279	-0.0787	-0.0465	-0.0983	-0.0633	0.3804
THEFT AND VANDALISM 3	180	-0.1366	-0.1418	-0.2127	-0.1162	-0.0050	-0.0162	-0.0750	-0.0994	-0.1002	-0.0674	0.2826
THEFT AND VANDALISM 4	181	-0.0606	-0.0511	-0.1075	-0.0985	-0.0259	-0.0284	-0.0210	-0.0318	-0.0891	-0.0339	0.2741
THEFT AND VANDALISM 5	182	-0.0847	-0.0522	-0.0807	-0.0731	-0.1112	-0.0457	-0.0593	-0.0838	-0.0548	-0.0424	0.2210

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*** OUTPUT CORRELATION MATRIX ***

		VAR	155	156	157	158	159	160	161	162	163	164	165
DAILY CIGARETTE USE=1	3	183	-0.1126	0.0126	0.0126	0.0616	0.1161	-0.1078	-0.2042	-0.2215	-0.1982	-0.1825	0.2751
DAILY CIGARETTE USE=1	4	184	-0.1006	0.0192	-0.0012	0.0569	0.0960	-0.1065	-0.1707	-0.2086	-0.1787	-0.1565	0.2536
DAILY CIGARETTE USE=1	5	185	-0.0850	-0.0060	-0.0196	0.0314	0.1343	-0.1164	-0.1696	-0.1828	-0.1416	-0.1159	0.2175
ALCOHOL USE 1-5	3	186	-0.0633	0.0210	-0.0584	-0.0097	0.0705	-0.0730	-0.0943	-0.1256	-0.1532	-0.1101	0.2645
ALCOHOL USE 1-5	4	187	-0.0250	0.0199	-0.0370	0.0042	0.0374	-0.0301	-0.0412	-0.0694	-0.0689	-0.0387	0.2383
ALCOHOL USE 1-5	5	188	-0.0237	-0.0188	-0.0147	0.0208	0.0228	-0.0045	-0.0553	-0.0280	-0.0161	-0.0362	0.1403
MARIJUANA USE 1-6	3	189	-0.0281	0.0001	-0.0666	-0.0670	-0.0282	-0.0047	-0.0583	-0.0082	-0.0263	0.0155	0.2472
MARIJUANA USE 1-6	4	190	0.0027	0.0178	-0.0417	-0.0399	-0.0448	0.0921	0.0738	0.0793	0.0544	0.0589	0.1735
MARIJUANA USE 1-6	5	191	-0.0013	-0.0292	-0.0265	-0.0441	-0.1042	0.0678	0.0085	0.0467	0.0729	0.0077	0.2008
DRUG USE:AMPH,BARB,LSD	3	192	-0.0156	-0.0103	-0.0687	-0.0850	-0.0407	-0.0293	-0.0545	-0.0180	-0.0530	0.0106	0.1864
DRUG USE:AMPH,BARB,LSD	4	193	-0.0155	-0.0142	-0.0656	-0.0906	-0.0491	0.0039	-0.0089	0.0101	-0.0517	-0.0191	0.1853
DRUG USE:AMPH,BARB,LSD	5	194	0.0343	0.0222	-0.0327	-0.0050	-0.0741	0.0283	-0.0078	-0.0323	0.0136	-0.0135	0.2010
SCHOOL MEAN S.T.L.	1	195	0.1515	0.1039	0.0809	0.1351	-0.0263	0.2041	0.2293	0.2414	0.2147	0.1788	-0.0610
SCHOOL MEAN QUICK TEST	1	196	0.1863	0.1623	0.1269	0.1438	0.0334	0.1989	0.2058	0.2521	0.2037	0.1778	-0.0731
SCHOOL MEAN GAI3-J	1	197	0.2151	0.1046	0.1494	0.1640	0.0261	0.2140	0.2190	0.2489	0.2034	0.1818	-0.1072
SCHOOL MEAN GAI3S	1	198	0.2224	0.1624	0.1587	0.1598	0.0294	0.1791	0.1916	0.2316	0.1804	0.1720	-0.1219
PARTICIPANT IN 1970=1	4	199	0.0786	0.0498	0.0553	99.9999	-0.0498	0.1356	0.1086	0.0394	99.9999	0.1066	-0.2159

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*** INTER-CORRELATION MATRIX ***

	VAR	166	167	168	169	170	171	172	173	174	175	176	
DELINQ BEHAV IN SCHOOL 3	167	0.6430											
SERIOUSNESS OF DELINQ 1	168	0.4199	0.3527										
SERIOUSNESS OF DELINQ 2	169	0.6651	0.3675	0.4340									
SERIOUSNESS OF DELINQ 3	170	0.4274	0.6199	0.3166	0.4613								
SERIOUSNESS OF DELINQ 4	171	0.3329	0.3619	0.3686	0.4053	0.4215							
SERIOUSNESS OF DELINQ 5	172	0.2294	0.2352	0.2721	0.2342	0.2233	0.3600						
INTERPERSONAL AGGRESSN 1	173	0.5245	0.3915	0.7538	0.4099	0.2881	0.3131	0.2305					
INTERPERSONAL AGGRESSN 2	174	0.6916	0.3493	0.3092	0.7616	0.3477	0.2867	0.2089	0.4127				
INTERPERSONAL AGGRESSN 3	175	0.4536	0.6601	0.2251	0.3803	0.7430	0.2950	0.1686	0.3373	0.4624			
INTERPERSONAL AGGRESSN 4	176	0.3774	0.4230	0.2440	0.3307	0.3376	0.6777	0.2452	0.3457	0.4042	0.4731		
INTERPERSONAL AGGRESSN 5	177	0.2224	0.2563	0.1853	0.1405	0.1850	0.2119	0.5851	0.2752	0.2601	0.2926	0.3755	
THEFT AND VANDALISM 1	178	0.3974	0.2926	0.9222	0.4143	0.3148	0.3612	0.2619	0.6504	0.2546	0.1779	0.1872	
THEFT AND VANDALISM 2	179	0.6476	0.3919	0.4353	0.9305	0.4837	0.4161	0.2283	0.3893	0.6240	0.3491	0.2886	
THEFT AND VANDALISM 3	180	0.4065	0.6134	0.3340	0.4410	0.9305	0.4225	0.2277	0.2711	0.2884	0.5987	0.2788	
THEFT AND VANDALISM 4	181	0.3237	0.3561	0.3573	0.3749	0.4051	0.9339	0.3481	0.2795	0.2340	0.2277	0.5406	
THEFT AND VANDALISM 5	182	0.2001	0.2186	0.2584	0.2216	0.2014	0.3391	0.9339	0.2125	0.1773	0.1241	0.2078	
DAILY CIGARETTE USE=1	3	183	0.4276	0.4594	0.1827	0.2276	0.1885	0.1486	0.1178	0.2509	0.1976	0.1899	0.1654
DAILY CIGARETTE USE=1	4	184	0.3772	0.4068	0.1870	0.1971	0.1794	0.1587	0.0933	0.2345	0.1656	0.1656	0.1565
DAILY CIGARETTE USE=1	5	185	0.3081	0.3708	0.1563	0.1586	0.1969	0.1113	0.1024	0.1933	0.1498	0.2086	0.1545
ALCOHOL USE 1-6	3	186	0.3414	0.3582	0.1937	0.2358	0.2081	0.3010	0.1725	0.2999	0.2044	0.1987	0.2603
ALCOHOL USE 1-6	4	187	0.2810	0.2750	0.2053	0.1783	0.1661	0.2565	0.1554	0.2794	0.1576	0.1399	0.2058
ALCOHOL USE 1-6	5	188	0.2341	0.2249	0.1256	0.1362	0.1427	0.1204	0.1651	0.1709	0.1223	0.1069	0.0901
MARIJUANA USE 1-6	3	189	0.3121	0.3175	0.2100	0.2001	0.2024	0.2468	0.1812	0.2352	0.1885	0.1522	0.2350
MARIJUANA USE 1-6	4	190	0.2056	0.2631	0.1980	0.1592	0.1722	0.2625	0.2160	0.1940	0.1207	0.0807	0.1666
MARIJUANA USE 1-6	5	191	0.2407	0.2431	0.2208	0.1589	0.1681	0.1949	0.2872	0.2127	0.1150	0.0896	0.1352
DRUG USE:AMT, BARN, LND 3	192	0.2676	0.2612	0.1831	0.2387	0.2270	0.3397	0.1528	0.1405	0.2411	0.1998	0.3373	
DRUG USE:AMT, BARN, LND 4	193	0.2351	0.2639	0.2153	0.2302	0.2139	0.3826	0.2401	0.2021	0.1950	0.1664	0.3245	

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*** CHI-SQUARE CORRELATION MATRIX ***

	VAR	165	167	168	169	170	171	172	173	174	175	176	
DRUG HABITATION, MARIJUANA, LSD	5	194	0.2316	0.2299	0.2250	0.1575	0.1750	0.2305	0.1591	0.2115	0.1165	0.1047	0.1266
SCHOOL YEAR S.E.L.	1	125	-0.1216	-0.1291	0.0533	-0.0880	-0.0998	-0.0342	0.0446	-0.0141	-0.1436	-0.1942	-0.1382
SCHOOL YEAR QUICK TEST	1	196	-0.1590	-0.1481	-0.0057	-0.1467	-0.1709	-0.0635	0.0034	-0.0313	-0.1838	-0.2278	-0.1353
SCHOOL YEAR GATB-J	1	197	-0.1936	-0.1917	-0.0244	-0.1604	-0.1989	-0.0943	-0.0263	-0.0717	-0.2230	-0.2884	-0.1928
SCHOOL YEAR GATB-K	1	198	-0.2047	-0.2044	-0.0438	-0.1751	-0.2284	-0.1071	-0.0015	-0.0764	-0.2245	-0.3035	-0.1990
PARTICIPANT IN 1975-76	4	199	-0.1640	-0.0877	-0.1819	-0.0877	-0.0489	99.9999	-0.1028	-0.1864	-0.1041	-0.0583	99.9999

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576

575

*** CORRELATION MATRIX ***

		VAR	177	178	179	180	181	182	183	184	185	186	187
THEFT AND VANDALISM	1	174	0.1377										
THEFT AND VANDALISM	2	179	0.1210	0.4523									
THEFT AND VANDALISM	3	180	0.1509	0.3638	0.5067								
THEFT AND VANDALISM	4	181	0.1430	0.3844	0.4280	0.4509							
THEFT AND VANDALISM	5	182	0.4355	0.2624	0.2346	0.2330	0.3597						
DAILY CIGARETTE USE=1	3	183	0.1175	0.2002	0.2207	0.1706	0.1520	0.0947					
DAILY CIGARETTE USE=1	4	184	0.1229	0.1971	0.2020	0.1655	0.1687	0.0725	0.7997				
DAILY CIGARETTE USE=1	5	185	0.1321	0.1462	0.1538	0.1711	0.1087	0.0754	0.5983	0.6763			
ALCOHOL USE 1-6	3	186	0.1423	0.2202	0.2437	0.2185	0.3139	0.1556	0.3954	0.3467	0.3011		
ALCOHOL USE 1-6	4	187	0.1185	0.2316	0.1851	0.1786	0.2758	0.1423	0.2981	0.3389	0.3019	0.7507	
ALCOHOL USE 1-6	5	189	0.1205	0.1456	0.1427	0.1521	0.1382	0.1455	0.2121	0.2117	0.2710	0.3879	0.4982
MARIJUANA USE 1-6	3	189	0.1250	0.2269	0.2064	0.2017	0.2475	0.1873	0.2890	0.2381	0.2001	0.2609	0.1673
MARIJUANA USE 1-6	4	190	0.1041	0.2256	0.1953	0.1986	0.2865	0.2179	0.2315	0.2503	0.2002	0.2540	0.2382
MARIJUANA USE 1-6	5	191	0.1353	0.2464	0.1781	0.1926	0.2190	0.3034	0.2166	0.1999	0.2607	0.2553	0.2764
DRUG USE: AMPH, BARB, LSD	3	192	0.1930	0.1702	0.2327	0.2002	0.2966	0.1588	0.1993	0.1527	0.1592	0.1957	0.1193
DRUG USE: AMPH, BARB, LSD	4	193	0.1523	0.2111	0.2382	0.2058	0.3536	0.2293	0.1928	0.2096	0.1622	0.1737	0.1432
DRUG USE: AMPH, BARB, LSD	5	194	0.2098	0.2330	0.1747	0.2023	0.2411	0.3659	0.1919	0.2006	0.2116	0.2100	0.2109
SCHOOL MEAN S.E.L.	1	195	-0.0572	0.1917	-0.0535	-0.0583	0.0083	0.0587	-0.0426	-0.0491	-0.0705	-0.0199	0.0232
SCHOOL MEAN QUICK TEST	1	196	-0.1801	0.1421	-0.1064	-0.1151	-0.0199	0.0287	-0.0188	-0.0355	-0.0708	0.0093	0.0339
SCHOOL MEAN GATE-J	1	197	-0.1049	0.1322	-0.1080	-0.1297	-0.0437	-0.0045	-0.0500	-0.0579	-0.0964	-0.0150	0.0197
SCHOOL MEAN GATES	1	198	-0.0065	0.1152	-0.1300	-0.1598	-0.0547	0.0228	-0.0550	-0.0676	-0.0918	-0.0395	0.0107
PARTICIPANT IN 1970=1	4	199	-0.1444	-0.1651	-0.1830	-0.0376	99.9999	-0.0932	99.9999	99.9999	-0.1188	99.9999	99.9999

Q183

*** OUTPUT CORRELATION MATRIX ***

		VAR	188	189	190	191	192	193	194	195	196	197	198
MARIJUANA USE 1-6	3	188	0.1236										
MARIJUANA USE 1-6	4	189	0.1643	0.7069									
MARIJUANA USE 1-6	5	191	0.3735	0.3628	0.4878								
DRUG USE:ALPH, BARD, LSD 3	192	0.1714	0.6722	0.4594	0.2251								
DRUG USE:ALPH, BARD, LSD 4	193	0.1076	0.5456	0.6353	0.2794	0.6929							
DRUG USE:ALPH, BARD, LSD 5	194	0.2535	0.2925	0.4175	0.6421	0.2815	0.3700						
SCHOOL MEAN S.E.L.	1	195	0.0264	0.0488	0.1814	0.0735	-0.0165	0.0168	0.0469				
SCHOOL MEAN QUICK TEST 1	196	-0.0298	0.0263	0.1337	-0.0050	-0.0380	-0.0031	0.0188	0.7447				
SCHOOL MEAN GATE-J	1	197	-0.0514	-0.0411	0.0891	-0.0342	-0.0978	-0.0439	0.0034	0.7053	0.8239		
SCHOOL MEAN GATES	1	198	-0.0420	-0.0433	0.0645	-0.0333	-0.0957	-0.0556	0.0013	0.6713	0.8742	0.9026	
PARTICIPANT IN 1970=1	4	199	-0.0372	99.9999	99.9999	-0.0601	99.9999	99.9999	-0.1022	-0.0034	0.0584	0.0608	0.0638

*****NO EXECUTION TERMINATED

*****NO MORE RUN COMMANDS
EXECUTION TERMINATED\$SIG S
1904 RELEASED.

579

580

G-84



APPENDIX H

YOUTH IN TRANSITION

A Nationwide Survey of Young Men

Dear Youth in Transition Member:

We hope you enjoyed our recent Newsletter telling you about some of the many findings from the Youth in Transition study. As we mentioned in the Newsletter, we are now conducting another survey - much shorter than in the past. Here is the questionnaire we told you about. Please take a few minutes to fill it out - it should take less than an hour of your time. When you have completed it, simply return it to us in the enclosed postage-paid envelope. When we receive the questionnaire with your code number, we will send you \$10.00 in appreciation of your time and effort.

We will send your check using the same name and address that appear on the envelope in which you received the questionnaire. If the address is incorrect, fill out the enclosed postcard and return it to us *separately* from the questionnaire. If the address is correct, disregard the enclosed postcard.

As before, all of your answers to questions will be kept completely confidential. Your name does not appear anywhere on the questionnaire; only a code number allows the research staff - and no one else - to identify it. When the questionnaire is received, the answers are put into a form which can never be traced back to you as an individual. But if there are some questions you'd rather not answer, just leave them blank. Also, you should feel free to write in any comments you want.

Your participation is essential to the success of the project, and we thank you in advance for your continuing help. We hope you find the experience of completing the questionnaire an interesting one.

Best regards,

Jerald G. Bachman
Program Director
Youth in Transition

INSTRUCTIONS

1. Please answer all questions in order.
2. Most questions need only a check mark (✓) to answer.
3. Please disregard the small numbers in parentheses. They are to help us punch your answers onto IBM cards.
4. When you have finished, seal the questionnaire in the envelope provided and drop it in the mail.

SECTION A

We would like to ask you some general questions first.

A1. What are you doing *now*? (CHECK ALL THAT APPLY)

- (1:21) ☐ a. Working for pay at a full-time or part-time job
(1:22) ☐ b. Taking vocational or technical courses at any kind of school or college (for example, vocational, trade, business, or other career training school)
(1:23) ☐ c. Taking academic courses at a two- or four-year college
(1:24) ☐ d. On active duty in the Armed Forces (or service academy)
(1:25) ☐ e. On temporary lay-off from work, looking for work, or waiting to report to work
(1:26) ☐ f. Other (please specify) _____

(1:27) A2. What one phrase describes what you are doing *mostly*? (CHECK ONLY ONE)

- ☐ (1) Student in vocational/technical school
☐ (2) Student in college
☐ (3) Working on a job
☐ (4) Serving in the military
☐ (5) Unemployed
☐ (6) Other (please specify) _____

A3. With whom do you live? (CHECK ALL THAT APPLY)

- (1:28) ☐ a. By myself
(1:29) ☐ b. With parents
(1:30) ☐ c. With wife
(1:31) ☐ d. With other relatives
(1:32) ☐ e. With persons not related to me
(1:33) ☐ f. Other (please specify) _____

(1:34-35) A4. Which of the following best describes the location of the place where you live?

- ☐ (01) In a rural or farming community
☐ (02) In a small city or town of fewer than 50,000 people that is not a suburb of a larger place
☐ (03) In a medium-sized city (50,000 - 100,000)
☐ (04) In a suburb of a medium-sized city
☐ (05) In a fairly large city (100,000 - 500,000)
☐ (06) In a suburb of a fairly large city
☐ (07) In a very large city (over 500,000)
☐ (08) In a suburb of a very large city

(1:36) A5. How far is this from the neighborhood where you lived when you were last in high school?

- ☐ (1) Same neighborhood where I lived when I was last in high school
☐ (2) Less than 50 miles
☐ (3) Over 50 miles

Now we'd like to know about some things you already are doing or have done or plan to do in the next few years. Please look at each of the ten activities listed below, and check the box (1, 2, 3, 4, 5, or 6) which shows how likely you are to do each.

(CHECK ONE BOX ON EACH LINE)

		I am now doing this	I have already done this	I definitely will do this	I probably will do this	I probably will <i>not</i> do this	I definitely will <i>not</i> do this
		(1)	(2)	(3)	(4)	(5)	(6)
(1:37)	A6. Complete high school or earn high school equivalency	☐	☐	☐	☐	☐	☐
(1:38)	A7. Receive on-the-job training	☐	☐	☐	☐	☐	☐
(1:39)	A8. Serve on active duty in the military service	☐	☐	☐	☐	☐	☐
(1:40)	A9. Receive job training in military service	☐	☐	☐	☐	☐	☐
(1:41)	A10. Attend a technical or vocational school since high school	☐	☐	☐	☐	☐	☐
(1:42)	A11. Attend a four year college	☐	☐	☐	☐	☐	☐
(1:43)	A12. Attend a two-year college	☐	☐	☐	☐	☐	☐
(1:44)	A13. Graduate from college (four year program)	☐	☐	☐	☐	☐	☐
(1:45)	A14. Graduate from a two-year college	☐	☐	☐	☐	☐	☐
(1:46)	A15. Attend graduate or professional school after college	☐	☐	☐	☐	☐	☐

SECTION B

The next questions are about the kind of job you would *like to have*, not necessarily the job you might have now, but rather the kind of job you'd *like to have*. Different people want different things from a job. Some of the things that might be important are listed below. Please read each of the things on the list, then check the box that tells how important this thing would be to you.

How important is
this for you?

Don't just check VERY IMPORTANT for everything. Try to think what things really matter to you, and what things really aren't that important.

		Very important	Pretty important	A little important	Not important
		(1)	(2)	(3)	(4)
(2:21)	B1. A job where there's no one to boss me on the work	☐	☐	☐	☐
(2:22)	B2. A job that is steady, no chance of being laid off	☐	☐	☐	☐
(2:23)	B3. A job where I can learn new things, learn new skills	☐	☐	☐	☐
(2:24)	B4. A job where I don't have to work too hard.	☐	☐	☐	☐
(2:25)	B5. A clean job, where I don't get dirty.	☐	☐	☐	☐
(2:26)	B6. A job with good chances of getting ahead	☐	☐	☐	☐
(2:27)	B7. A job where I don't have to take a lot of responsibility	☐	☐	☐	☐
(2:28)	B8. A job that leaves me a lot of free time to do what I want to do	☐	☐	☐	☐
(2:29)	B9. A job where the pay is good	☐	☐	☐	☐
(2:30)	B10. A job that my friends think a lot of -- has class	☐	☐	☐	☐
(2:31)	B11. A job that uses my skills and abilities -- lets me do the things I can do best	☐	☐	☐	☐
(2:32)	B12. A job that has nice friendly people to work with	☐	☐	☐	☐
(2:33)	B13. A job that doesn't make me learn a lot of new things	☐	☐	☐	☐

The next few questions ask you to describe what kind of person you are. Please read each sentence, then mark the box that shows how often it is true for you.
(CHECK ONE BOX ON EACH LINE)

		Almost always true	Often true	Sometimes true	Seldom true	Never true
		(1)	(2)	(3)	(4)	(5)
(2:34)	B14. I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐	☐
(2:35)	B15. I feel that I have a number of good qualities.	☐	☐	☐	☐	☐
(2:36)	B16. I am able to do things as well as most other people.	☐	☐	☐	☐	☐
(2:37)	B17. I feel I do not have much to be proud of.	☐	☐	☐	☐	☐
(2:38)	B18. I take a positive attitude toward myself.	☐	☐	☐	☐	☐
(2:39)	B19. Sometimes I think I am no good at all.	☐	☐	☐	☐	☐
(2:40)	B20. I am a useful guy to have around.	☐	☐	☐	☐	☐
(2:41)	B21. I feel that I can't do anything right.	☐	☐	☐	☐	☐
(2:42)	B22. When I do a job, I do it well.	☐	☐	☐	☐	☐
(2:43)	B23. I feel that my life is not very useful.	☐	☐	☐	☐	☐

The next section of this questionnaire is about government and public affairs.
(CHECK ONE BOX FOR EACH QUESTION)

- (2:44) B24. Some people think about what's going on in government very often, and others are not that interested. How much of an interest do you take in government and current events?

- ☐ (1) A very great interest
- ☐ (2) A lot of interest
- ☐ (3) Some interest
- ☐ (4) Very little interest
- ☐ (5) No interest at all

- (2:45) B25. Do you think the government wastes much of the money we pay in taxes?

- ☐ (1) Nearly all tax money is wasted
- ☐ (2) A lot of tax money is wasted
- ☐ (3) Some tax money is wasted
- ☐ (4) A little tax money is wasted
- ☐ (5) No tax money is wasted

- (2:46) B26. How much of the time do you think you can trust the government in Washington to do what is right?

- ☐ (1) Almost always
- ☐ (2) Often
- ☐ (3) Sometimes
- ☐ (4) Seldom
- ☐ (5) Never

- (2:47) B27. Do you feel that the people running the government are smart people who usually know what they are doing?

- ☐ (1) They almost always know what they are doing
- ☐ (2) They usually know what they are doing
- ☐ (3) They sometimes know what they are doing
- ☐ (4) They seldom know what they are doing
- ☐ (5) They never know what they are doing

(2:48) B28. Do you think some of the people running the government are crooked or dishonest?

- ☐ (1) Most of them are crooked or dishonest
- ☐ (2) Quite a few are
- ☐ (3) Some are
- ☐ (4) Hardly any are
- ☐ (5) None at all are crooked or dishonest

(2:49) B29. Would you say the government is pretty much run for a few big interests looking out for themselves, or is it run for the benefit of all the people?

- ☐ (1) Nearly always run for a few big interests
- ☐ (2) Usually run for a few big interests
- ☐ (3) Run some for the big interests, some for the people
- ☐ (4) Usually run for the benefit of all the people
- ☐ (5) Nearly always run for the benefit of all the people

(2:50) B30. Do you think military personnel have too much or too little influence on the way the country is run?

- ☐ (1) Far too much
- ☐ (2) Too much
- ☐ (3) About right
- ☐ (4) Too little
- ☐ (5) Far too little

(2:51) B31. Do you think the U.S. spends too much or too little on the military?

- ☐ (1) Far too much
- ☐ (2) Too much
- ☐ (3) About right
- ☐ (4) Too little
- ☐ (5) Far too little

(2:52) B32. How would you describe your political preference?

- ☐ (1) Strongly Republican
- ☐ (2) Mildly Republican
- ☐ (3) Mildly Democrat
- ☐ (4) Strongly Democrat
- ☐ (5) American Independent Party
- ☐ (6) No preference, independent
- ☐ (7) Other (please specify) _____
- ☐ (8) Haven't thought about it; don't know

Do you agree or disagree with each of the following statements?
(CHECK ONE BOX ON EACH LINE)

Strongly agree
Agree
Disagree
Strongly disagree
(1) (2) (3) (4)

- (2:53) B33. I feel you can be a good citizen even if you don't salute the flag. ☐ ☐ ☐ ☐
- (2:54) B34. I feel that you can't be a good citizen unless you always obey the law. ☐ ☐ ☐ ☐
- (2:55) B35. I feel a good citizen should go along with whatever the government does even if he disagrees with it. ☐ ☐ ☐ ☐
- (2:56) B36. I feel you can't be a good citizen unless you vote regularly in elections. ☐ ☐ ☐ ☐
- (2:57) B37. I feel a good citizen tries to change the government policies he disagrees with. ☐ ☐ ☐ ☐

The next questions ask your opinion about the United States fighting in Vietnam during the past few years. Do you agree or disagree with each of the following statements? (CHECK ONE BOX ON EACH LINE)

Strongly agree
Agree
Disagree
Strongly disagree
(1) (2) (3) (4)

- (2:58) B38. Fighting the war in Vietnam was damaging to our national honor or pride. ☐ ☐ ☐ ☐
- (2:59) B39. Fighting the war in Vietnam was really not in the national interest. ☐ ☐ ☐ ☐
- (2:60) B40. Fighting the war in Vietnam was important to fight the spread of Communism. ☐ ☐ ☐ ☐
- (2:61) B41. Fighting the war in Vietnam brought us closer to world war. ☐ ☐ ☐ ☐
- (2:62) B42. Fighting the war in Vietnam was important to protect friendly countries. ☐ ☐ ☐ ☐
- (2:63) B43. Fighting the war in Vietnam was important to show other nations that we keep our promises. ☐ ☐ ☐ ☐

Now we'd like to learn your opinions about the way people of different races get along in America, and how you would *like* things to be. Try to check the answers that tell how you really feel? if there is any question that you don't want to answer, just leave it blank.

Do you agree or disagree with the following statements?
(CHECK ONE BOX FOR EACH QUESTION)

		Agree	Agree mostly	Disagree mostly	Disagree
		(1)	(2)	(3)	(4)
(2:64)	B44. The government in Washington should see to it that white and black children are allowed to go to the same schools if they want to	☐	☐	☐	☐
(2:65)	B45. The government in Washington should see to it that people are treated fairly and equally in jobs, no matter what their race may be	☐	☐	☐	☐
(2:66)	B46. It is not the government's business to pass laws about equal treatment for all races	☐	☐	☐	☐

(2:67) B47. Suppose you had a job where your supervisor was a qualified person of a different race (white, black). Would you mind that a lot, a little, or not at all?

- ☐ (1) A lot
☐ (2) A little
☐ (3) Not at all

(2:68) B48. If a family of a different race (but same level of education and income) moved next door to you, how would you feel about it?

- ☐ (1) I'd mind it a lot
☐ (2) I'd mind it a little
☐ (3) I wouldn't mind it at all

(2:69) B49. If you have small children now or later on, would you rather they had only white friends, only black friends, or both?

- ☐ (1) I'd like them to have only white friends
☐ (2) I'd like them to have only black friends
☐ (3) I'd like them to have both black and white friends

(2:70) B50. Do you think that very many blacks miss out on jobs and promotions because of racial discrimination?

- ☐ (1) Many
☐ (2) Some
☐ (3) Only a few
☐ (4) None at all

(2:71) B51. Do you think that many blacks miss out on good housing because white owners will not rent or sell to them?

- ☐ (1) Many
☐ (2) Some
☐ (3) Only a few
☐ (4) None at all

(2:72) B52. Do you think that many blacks miss out on good schooling because of racial discrimination?

- ☐ (1) Many
☐ (2) Some
☐ (3) Only a few
☐ (4) None at all

SECTION C
WORK EXPERIENCE

Please answer the following questions about your present, or your most recently held, job. If you hold (held) more than one job, answer only for the most important job.

(3:21-23) C1. What kind of work do you (did you) do? _____

(3:24-25) C1a. In what kind of business or industry is (was) this job? _____

(3:26) C1b. Do you (did) you work for yourself or someone else?

- ☐ (1) Self
☐ (2) Someone else

(3:27-28) C2. About how many hours a week do you (did you) work on this job? _____

(3:29-32) C3. What is (was) your hourly wage? \$ _____ per hour

(3:33-36) C3a. (OR: \$ _____ per week)

(3:37-41) C3b. (OR: \$ _____ per month)

(3:42-45) C4. When did you enter this job? _____ (month, year)

The next four questions refer to the entire 52-week period from January 1, 1973 to December 31, 1973.

(3:46-47) C5. How much did you earn from working (salary, wages, tips, commissions) in the entire year of 1973 (before taxes)?

- | | |
|---|--|
| ☐ (01) \$0 | ☐ (10) \$8,000 - 8,999 |
| ☐ (02) \$1 - 999 | ☐ (11) \$9,000 - 9,999 |
| ☐ (03) \$1,000 - 1,999 | ☐ (12) \$10,000 - 10,999 |
| ☐ (04) \$2,000 - 2,999 | ☐ (13) \$11,000 - 11,999 |
| ☐ (05) \$3,000 - 3,999 | ☐ (14) \$12,000 - 14,999 |
| ☐ (06) \$4,000 - 4,999 | ☐ (15) \$15,000 - 19,999 |
| ☐ (07) \$5,000 - 5,999 | ☐ (16) \$20,000 - 24,999 |
| ☐ (08) \$6,000 - 6,999 | ☐ (17) \$25,000 - 34,999 |
| ☐ (09) \$7,000 - 7,999 | ☐ (18) \$35,000 and above |

(3:48-49) C6. In how many different weeks did you work either full- or part-time in this period (not counting work around the house)? Count any week where you did any work at all and include paid vacations and paid sick leave.

_____ Number of weeks

(3:50-51) C7. How many weeks during this period did you spend looking for work or on lay-off from a job?

_____ Number of weeks

(3:52) C8. How many different employers did you work for altogether during this period? (Count each employer only once, even if you had different jobs for the same employer.)

_____ Number of employers in 1973

(3:53-54) C9. Now, about how many different employers (that is, different companies or organizations or individual employers) have you worked for on *full-time* jobs since summer, 1969? (If you are not sure, guess) Do not include jobs held just in the summer when you were in school.

_____ Number of employers since summer, 1969

(3:55) C10. Do you have any health problems or physical conditions that limit in any way the amount or kind of work you can do?

- ☐ (1) Yes (EXPLAIN) _____
- ☐ (2) No

SECTION D

MILITARY EXPERIENCE

(4:21) D1. Are you now or have you ever been a member of the Armed Forces?

☐

(1) Yes

☐

(2) No → GO TO NEXT PAGE, QUESTION E1

(4:22) D2. What branch of the Armed Forces were (are) you in?

☐

(1) Army

☐

(5) Reserves (any branch)

☐

(2) Navy

☐

(6) National Guard

☐

(3) Marine Corps

☐

(7) Coast Guard

☐

(4) Air Force

☐

(8) ROTC

(4:23) D3. Were you drafted?

☐

(1) Yes

☐

(3) No

☐

(5) No, but I would have been if I hadn't enlisted

(4:24-27) D4. When did you serve on active duty (don't count Reserves, National Guard, or ROTC)?

(4:28-31)

From _____ to _____
Month, Year Month, Year

(if still on active duty,
please fill in date you
expect to complete your
active duty)

(4:32-33) D5. What is the highest rank you reached in the Armed Forces?

(4:34) D6. Did you serve in Vietnam?

☐

(1) Yes

☐

(2) No

(4:35-36) D6a. For how many months? _____ (Number of months)

(4:37) D7. All things considered, how satisfied are you with the work you were (are) doing in the military service?

☐

(1) Very satisfied

☐

(2) Quite satisfied

☐

(3) Somewhat satisfied

☐

(4) Not very satisfied

☐

(5) Not at all satisfied

SECTION E

EDUCATIONAL EXPERIENCE

(4:38) E1. How many years of schooling have you completed?

- ☐ (1) 10
☐ (2) 11
☐ (3) 12
☐ (4) 13

- ☐ (5) 14
☐ (6) 15
☐ (7) 16
☐ (8) 17 or over

(4:39) E2. Have you a high school diploma?

- ☐ (1) Yes
☐ (5) No

(4:40) E2a. Does the fact of not having a high school diploma seem to hinder you as far as getting a job is concerned?

- ☐ (1) Yes, I've had a lot of trouble
☐ (3) Yes, I've had a little trouble
☐ (5) No

(4:41) E2b. Does not having a high school diploma seem to hinder you as far as advancing on the job is concerned? (promotions, raises, etc.)

- ☐ (1) Yes, a lot
☐ (3) Yes, a little
☐ (5) No

(4:42) E3. What is the highest degree you have earned?

- ☐ (1) Less than a high school diploma
☐ (2) High school diploma or equivalency (for example, G.E.D.)
☐ (3) Associate's degree
☐ (4) Bachelor's degree (or LL.B)
☐ (5) Master's degree
☐ (6) Other graduate degree
☐ (7) Other (please specify) _____

(4:43) E4. Since leaving high school, have you attended any school like a college or university, service academy, business school, trade school, technical institute, vocational school, community college, and so forth?

- ☐ (1) Yes GO TO NEXT PAGE
☐ (2) No GO TO QUESTION F1, PAGE 16

Please answer the following questions for your current school, or the school you most recently attended (unless you are a graduate student, in which case answer about the school where you received your Bachelor's degree).

- (4:44-46) E5. What is the exact name and location of the school you are (were) attending?
(PLEASE PRINT AND DO NOT ABBREVIATE)

School name: _____

City: _____ State: _____

- (4:47-50) E6. When did you attend this school?
(4:51-54)

Month, year _____ to _____ Month, year _____

- (4:55) E7. What kind of school is this?

- ☐ (1) Vocational, trade, business or other career training school
☐ (2) Junior or community college
☐ (3) Four-year college or university
☐ (4) Other (please specify) _____

- (4:56) E8. Roughly how many students are (were) enrolled at this school?

- ☐ (1) 1 - 99
☐ (2) 100 - 499
☐ (3) 500 - 999
☐ (4) 1,000 - 2,999
☐ (5) 3,000 - 9,999
☐ (6) 10,000 - 19,999
☐ (7) over 20,000

(4:57-58) E9. What is (was) your major field of study? (CHECK ONLY ONE BOX)

ACADEMIC FIELDS (usually leading to at least a Bachelor's degree)

- ☐ (01) Biological Sciences
- ☐ (02) Business
- ☐ (03) Education (elementary, special, physical, etc.)
- ☐ (04) Engineering
- ☐ (05) Humanities and Fine Arts (music, religion, English, etc.)
- ☐ (06) Physical Sciences and Mathematics
- ☐ (07) Social Sciences (psychology, history, etc.)
- ☐ (08) Other academic fields (please specify) _____

VOCATIONAL AREAS (usually *not* leading to a Bachelor's degree)

- ☐ (09) Office and Clerical
- ☐ (10) Computer Technology
- ☐ (11) Mechanical and Engineering Technology
- ☐ (12) Health Services
- ☐ (13) Public Services (police science, food service, beautician, etc.)
- ☐ (14) Other vocational areas (please specify) _____

(4:59-60) E10. What is the average grade you received in your classes during your last year at this school? Putting them all together, how did your grades average out?

- | | |
|--|---|
| ☐ (01) A+ (97 to 100) | ☐ (07) C+ (77 to 79) |
| ☐ (02) A (93 to 96) | ☐ (08) C (73 to 76) |
| ☐ (03) A- (90 to 92) | ☐ (09) C- (70 to 72) |
| ☐ (04) B+ (87 to 89) | ☐ (10) D+ (67 to 69) |
| ☐ (05) B (83 to 86) | ☐ (11) D (63 to 66) |
| ☐ (06) B- (80 to 82) | ☐ (12) D- (60 to 62) |
| | ☐ (13) E (F) Failing |

SECTION F

The next questions ask about your present (or most recently held) job. If you hold more than one job, answer only for the job you consider most important. If you are on active duty in the Armed Forces, consider that your job.

(5:21) F1. All things considered, how satisfied are you with your work experience on your present (or most recent) job?

- ☐ (1) Very satisfied
- ☐ (2) Quite satisfied
- ☐ (3) Somewhat satisfied
- ☐ (4) Not very satisfied
- ☐ (5) Not at all satisfied

(5:22) F2. How often do you get a chance to work with a supervisor in planning what your work will be — like what you will be doing, or how you should do it?

- ☐ (1) Almost always
- ☐ (2) Often
- ☐ (3) Sometimes
- ☐ (4) Seldom
- ☐ (5) Never

(5:23) F3. How interesting is your job to you?

- ☐ (1) Very exciting and stimulating
- ☐ (2) Quite interesting
- ☐ (3) Fairly interesting
- ☐ (4) Slightly dull
- ☐ (5) Very dull

(5:24) F4. How important do you think the things you are learning in your job are going to be for your later life?

- ☐ (1) Very important
- ☐ (2) Quite important
- ☐ (3) Fairly important
- ☐ (4) Slightly important
- ☐ (5) Not at all important

(5:25) F5. What I have learned in high school helps me do better on my job.

- ☐ (1) Very true
- ☐ (2) Somewhat true
- ☐ (3) Not at all true

(5:26) F6. I could do my present (or most recent) job just as well without any high school education.

- ☐ (1) Very true
☐ (2) Somewhat true
☐ (3) Not at all true

How true is this
 for your present
 (most recent) job?

In an earlier section, we asked you some questions about the kind of job you'd *like* to have. Here are some questions about your present job — how true is each of the following statements for *the job you have now?* (or for your most recent job, if you don't have a job now.)

			Very true	Pretty true	A little true	Not at all true
			(1)	(2)	(3)	(4)
(5:27)	F7.	There's no one to boss me on the work.	☐	☐	☐	☐
(5:28)	F8.	It is steady, no chance of being laid off.	☐	☐	☐	☐
(5:29)	F9.	I can learn new things, learn new skills.	☐	☐	☐	☐
(5:30)	F10.	I don't have to work too hard.	☐	☐	☐	☐
(5:31)	F11.	It is a clean job, where I don't get dirty.	☐	☐	☐	☐
(5:32)	F12.	It has good chances for getting ahead.	☐	☐	☐	☐
(5:33)	F13.	I don't have to take a lot of responsibility.	☐	☐	☐	☐
(5:34)	F14.	It leaves me a lot of free time to do what I want to do.	☐	☐	☐	☐
(5:35)	F15.	The pay is good.	☐	☐	☐	☐
(5:36)	F16.	It is a job that my friends think a lot of -- has class.	☐	☐	☐	☐
(5:37)	F17.	It uses my skills and abilities -- lets me do the things I can do best.	☐	☐	☐	☐
(5:38)	F18.	There are nice friendly people to work with.	☐	☐	☐	☐
(5:39)	F19.	It doesn't make me learn a lot of new things.	☐	☐	☐	☐

SECTION G

Now we'd like to ask you some questions about your long-range occupational plans.

- (5:40-44) G1. In the long run, what sort of work do you think you might do for a living?
(PLEASE WRITE IN - SAY AS MUCH AS YOU CAN ABOUT THE SORT
OF JOB YOU EXPECT TO HAVE.)

- (5:45) G2. How certain are you that the work you plan to do is a good choice for you?

- ☐ (1) Completely certain
- ☐ (2) Very certain
- ☐ (3) Fairly certain
- ☐ (4) Somewhat certain
- ☐ (5) Not at all certain

- (5:46) G3. How satisfying do you think you will find this kind of work?

- ☐ (1) Not very satisfying
- ☐ (2) Somewhat satisfying
- ☐ (3) Quite satisfying
- ☐ (4) Very satisfying
- ☐ (5) Extremely satisfying

- (5:47) G4. Fifteen years from now, if you are doing this type of work, about how much do you expect you will be earning? Assume that the value of the dollar will be the same.

- ☐ (1) Less than \$3,000 a year
- ☐ (2) \$3,000 - \$5,000
- ☐ (3) \$5,000 - \$7,500
- ☐ (4) \$7,500 - \$10,000
- ☐ (5) \$10,000 - \$15,000
- ☐ (6) \$15,000 - \$25,000
- ☐ (7) More than \$25,000 a year

Please account for your activities since 1969 by marking all activities that apply to you in each row. (CHECK AT LEAST ONE BOX IN EACH ROW)

		STUDENT		MILITARY SERVICE		EMPLOYED		UNEMPLOYED		OTHER (SPECIFY)
		full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time	
G5.	Summer, 1969	☐	☐	☐	☐	☐	☐	☐	☐	_____
G6.	Sept., 1969 – May, 1970	☐	☐	☐	☐	☐	☐	☐	☐	_____
G7.	Summer, 1970	☐	☐	☐	☐	☐	☐	☐	☐	_____
G8.	Sept., 1970 – May, 1971	☐	☐	☐	☐	☐	☐	☐	☐	_____
G9.	Summer, 1971	☐	☐	☐	☐	☐	☐	☐	☐	_____
G10.	Sept., 1971 – May, 1972	☐	☐	☐	☐	☐	☐	☐	☐	_____
G11.	Summer, 1972	☐	☐	☐	☐	☐	☐	☐	☐	_____
G12.	Sept., 1972 – May, 1973	☐	☐	☐	☐	☐	☐	☐	☐	_____
G13.	Summer, 1973	☐	☐	☐	☐	☐	☐	☐	☐	_____
G14.	Sept., 1973 – May, 1974	☐	☐	☐	☐	☐	☐	☐	☐	_____

SECTION H

This section deals with activities which may be against the rules or against the law. For the most part, these are questions we have asked you in past interviews about an earlier stage in your life. Now we want to ask you about your more recent experiences.

We hope you will answer all of these questions. However, if you find a question which you cannot answer honestly, we would prefer that you leave it blank. Remember, only the research staff will see your answers. Your answers will never be connected with your name — they cannot be traced back to you as an individual.

Here are a number of things which you might do that could get you into trouble. Please tell us how many times you have done these things in the last year. For each question, put a check in the box next to the answer that is true for you.

(CHECK ONE BOX ON EACH LINE)

			5 or more times (1)	3 or 4 times (2)	Twice (3)	Once (4)	Never (5)
(6:21)	H1.	Gotten into a serious fight in school or at work	☐	☐	☐	☐	☐
(6:22)	H2.	Taken something not belonging to you worth under \$50	☐	☐	☐	☐	☐
(6:23)	H3.	Went onto someone's land or into some house or building when you weren't supposed to be there	☐	☐	☐	☐	☐
(6:24)	H4.	Set fire to someone else's property on purpose	☐	☐	☐	☐	☐
(6:25)	H5.	Gotten something by telling a person something bad would happen to him if you didn't get what you wanted	☐	☐	☐	☐	☐
(6:26)	H6.	Argued or had a fight with either of your parents	☐	☐	☐	☐	☐
(6:27)	H7.	Gotten into trouble with police because of something you did.	☐	☐	☐	☐	☐
(6:28)	H8.	Hurt someone badly enough to need bandages or a doctor	☐	☐	☐	☐	☐
(6:29)	H9.	Damaged school property on purpose	☐	☐	☐	☐	☐
(6:30)	H10.	Damaged property at work on purpose	☐	☐	☐	☐	☐
(6:31)	H11.	Taken something from a store without paying for it	☐	☐	☐	☐	☐
(6:32)	H12.	Hit an instructor or supervisor.	☐	☐	☐	☐	☐

In the last year, how
how often have you
done this?

41.

		5 or more times	3 or 4 times	Twice	Once	Never
		(1)	(2)	(3)	(4)	(5)
(6:33)	H13. Taken a car that didn't belong to someone in your family without permission of the owner	☐	☐	☐	☐	☐
(6:34)	H14. Taken an expensive part of a car without permission of the owner	☐	☐	☐	☐	☐
(6:35)	H15. Taken part in a fight where a bunch of your friends are against another bunch	☐	☐	☐	☐	☐
(6:36)	H16. Taken something not belonging to you worth over \$50	☐	☐	☐	☐	☐
(6:37)	H17. Taken an inexpensive part of a car without permission of the owner	☐	☐	☐	☐	☐
(6:38)	H18. Used a knife or gun or some other thing (like a club) to get something from a person	☐	☐	☐	☐	☐

The rest of this section deals with drugs. This study has already made a considerable contribution to our knowledge about drugs because of your cooperation in the past, and we hope you can help us again. However, if you find a question which you cannot answer honestly, we would prefer that you leave it blank.

(CHECK ONE BOX ON EACH LINE)

		All	Most	Some	A few	None
		(1)	(2)	(3)	(4)	(5)
	H19. How many of your friends would you estimate:					
(6:39)	a. smoke cigarettes?	☐	☐	☐	☐	☐
(6:40)	b. smoke marijuana (pot, grass) or hashish?	☐	☐	☐	☐	☐
(6:41)	c. take amphetamines (pep pills, bennies, speed, uppers)?	☐	☐	☐	☐	☐
(6:42)	d. take methaqualone (quads, quaaludes)?	☐	☐	☐	☐	☐
(6:43)	e. take barbiturates (yellow jackets, red devils, downers)?	☐	☐	☐	☐	☐
(6:44)	f. take heroin (smack, "H")?	☐	☐	☐	☐	☐
(6:45)	g. take hallucinogens (LSD, mescaline, peyote, etc.)?	☐	☐	☐	☐	☐
(6:46)	h. take cocaine?	☐	☐	☐	☐	☐
(6:47)	i. drink alcoholic beverages (liquor, beer, wine)?	☐	☐	☐	☐	☐

H20. How often have you done this during part or all of the *last year* for other than medical reasons?

		Nearly every day	Once or twice a week	Once or twice a month	3 to 10 times a year	Once or twice a year	Never
		(1)	(2)	(3)	(4)	(5)	(6)
(6:48)	a. Smoked cigarettes	☐	☐	☐	☐	☐	☐
(6:49)	b. Smoked marijuana (pot, grass) or hashish	☐	☐	☐	☐	☐	☐
(6:50)	c. Taken amphetamines (pep pills, bennies, speed, uppers).	☐	☐	☐	☐	☐	☐
(6:51)	d. Taken methaqualone (quads, quaaludes).	☐	☐	☐	☐	☐	☐
(6:52)	e. Taken barbiturates (yellow jackets, red devils, downers).	☐	☐	☐	☐	☐	☐
(6:53)	f. Taken heroin (smack, "H")	☐	☐	☐	☐	☐	☐
(6:54)	g. Taken hallucinogens (LSD, mescaline, peyote, etc.) . .	☐	☐	☐	☐	☐	☐
(6:55)	h. Taken cocaine, ...	☐	☐	☐	☐	☐	☐
(6:56)	i. Used alcoholic beverages (liquor, beer, wine) . . .	☐	☐	☐	☐	☐	☐
(6:57)	j. Used wine, specifically.	☐	☐	☐	☐	☐	☐
(6:58)	k. Used beer	☐	☐	☐	☐	☐	☐
(6:59)	l. Used hard liquor	☐	☐	☐	☐	☐	☐

H21. Think back over the last four years -- that is, since we last talked to you in the Spring of 1970. Now, for each drug, pick the one year since then in which you used it most often. *During that one year*, how often did you use that drug? (Do not include drug use for medical reasons.)

		Nearly every day	Once or twice a week	Once or twice a month	3 to 10 times a year	Once or twice a year	Never
		(1)	(2)	(3)	(4)	(5)	(6)
(6:60)	a. Smoked cigarettes	☐	☐	☐	☐	☐	☐
(6:61)	b. Smoked marijuana (pot, grass) or hashish	☐	☐	☐	☐	☐	☐
(6:62)	c. Taken amphetamines (pep pills, bennies, speed, uppers).	☐	☐	☐	☐	☐	☐
(6:63)	d. Taken methaqualone (quads, quaaludes).	☐	☐	☐	☐	☐	☐
(6:64)	e. Taken barbiturates (yellow jackets, red devils, downers).	☐	☐	☐	☐	☐	☐
(6:65)	f. Taken heroin (smack, "H")	☐	☐	☐	☐	☐	☐
(6:66)	g. Taken hallucinogens (LSD, mescaline, peyote, etc.).	☐	☐	☐	☐	☐	☐
(6:67)	h. Taken cocaine	☐	☐	☐	☐	☐	☐
(6:68)	i. Used alcoholic beverages (liquor, beer, wine)	☐	☐	☐	☐	☐	☐

People differ in how they feel about individuals doing certain things. How do you feel about people your age doing each of the following?
(CHECK ONE BOX ON EACH LINE)

		Strongly approve	Approve	I feel neutral	Disapprove	Strongly disapprove	I CAN'T SAY, UNFAMILIAR WITH DRUG
		(1)	(2)	(3)	(4)	(5)	(6)
(7:21)	H22. Smoking one or more packs of cigarettes per day	☐	☐	☐	☐	☐	☐
(7:22)	H23. Trying marijuana (pot, grass) once or twice	☐	☐	☐	☐	☐	☐
(7:23)	H24. Smoking marijuana occasionally	☐	☐	☐	☐	☐	☐
(7:24)	H25. Smoking marijuana regularly	☐	☐	☐	☐	☐	☐
(7:25)	H26. Trying LSD once or twice	☐	☐	☐	☐	☐	☐
(7:26)	H27. Taking LSD regularly	☐	☐	☐	☐	☐	☐
(7:27)	H28. Trying heroin (smack, "H") once or twice	☐	☐	☐	☐	☐	☐
(7:28)	H29. Taking heroin occasionally	☐	☐	☐	☐	☐	☐
(7:29)	H30. Taking heroin regularly	☐	☐	☐	☐	☐	☐
(7:30)	H31. Trying a barbiturate (yellow jacket, red devil, downer) once or twice	☐	☐	☐	☐	☐	☐
(7:31)	H32. Taking barbiturates regularly	☐	☐	☐	☐	☐	☐
(7:32)	H33. Trying an amphetamine (pep pill, bennie, speed, upper) once or twice	☐	☐	☐	☐	☐	☐
(7:33)	H34. Taking amphetamines regularly	☐	☐	☐	☐	☐	☐
(7:34)	H35. Trying alcoholic beverages (liquor, beer, wine) once or twice	☐	☐	☐	☐	☐	☐
(7:35)	H36. Drinking alcoholic beverages regularly	☐	☐	☐	☐	☐	☐
(7:36)	H37. Trying cocaine once or twice	☐	☐	☐	☐	☐	☐

		Nearly every day	Once or twice a week	Once or twice a month	3 to 10 times a year	Once or twice a year	Never
		(1)	(2)	(3)	(4)	(5)	(6)
(7:37)	a. marijuana or hashish	☐	☐	☐	☐	☐	☐
(7:38)	b. amphetamines	☐	☐	☐	☐	☐	☐
(7:39)	c. methaqualone (quaaludes).	☐	☐	☐	☐	☐	☐
(7:40)	d. barbiturates	☐	☐	☐	☐	☐	☐
(7:41)	e. heroin	☐	☐	☐	☐	☐	☐
(7:42)	f. hallucinogens	☐	☐	☐	☐	☐	☐
(7:43)	g. cocaine	☐	☐	☐	☐	☐	☐
(7:44)	h. alcoholic beverages (liquor, beer, wine)	☐	☐	☐	☐	☐	☐
(7:45)	i. wine, specifically	☐	☐	☐	☐	☐	☐
(7:46)	j. beer	☐	☐	☐	☐	☐	☐
(7:47)	k. hard liquor	☐	☐	☐	☐	☐	☐

(7:48) H39. How difficult do you think it would be for you to get marijuana (pot, grass) if you wanted some?

- ☐ (1) Probably impossible
☐ (2) Very difficult
☐ (3) Fairly difficult
☐ (4) Fairly easy
☐ (5) Very easy

(7:49) H40. How difficult do you think it would be for you to get heroin (smack, "H") if you wanted some?

- ☐ (1) Probably impossible
☐ (2) Very difficult
☐ (3) Fairly difficult
☐ (4) Fairly easy
☐ (5) Very easy

(8:21) H41. Have you ever had any drug education courses or lectures since leaving high school?

- ☐ (1) No, and I wish I had
☐ (2) No, and I'm glad I didn't
☐ (3) Yes, and it was of some value
☐ (4) Yes, but it was of little or no value

(8:22) H42. Have you ever wanted to get professional help for a problem with your own use of drugs (including alcohol)? (CHECK ONLY ONE)

- ☐ (1) No
☐ (2) Yes, and I did get help
☐ (3) Yes, but I didn't know where to go
☐ (4) Yes, but I didn't get help

(8:23) H43. Have you ever felt in your own mind that you should *reduce* or *stop* your use of alcohol, cigarettes, or any other drug listed below?

- ☐ (1) No
☐ (2) Yes  CHECK WHICH DRUG(S)

(8:24)

☐ a. Cigarettes

(8:25)

☐ b. Marijuana

(8:26)

☐ c. Amphetamines

(8:27)

☐ d. Methaqualone (quaaludes)

(8:28)

☐ e. Barbiturates

(8:29)

☐ f. Heroin

(8:30)

☐ g. Hallucinogens

(8:31)

☐ h. Cocaine

(8:32)

☐ i. Alcohol

(8:33) H44. Have you ever been arrested for possession or sale of an illegal drug?

- ☐ (1) No
☐ (2) Yes

(8:34) H45. How likely do you think it is that you will use marijuana at some time in the future?

- ☐ (1) I definitely will
- ☐ (2) I probably will
- ☐ (3) I probably will not
- ☐ (4) I definitely will not

(8:35) H46. If marijuana were legal and available, I would probably:

- ☐ (1) Try it
- ☐ (2) Use it more than I do now
- ☐ (3) Use it less than I do now
- ☐ (4) Use it about as often as I do now
- ☐ (5) Not use it even if it were legal
- ☐ (6) Don't know

H47. Here are some reasons people give for not using marijuana, or for stopping use. If you have *never* used marijuana, or if you have *stopped* using it, please tell us which reasons are true for you. (CHECK ALL THAT APPLY)

(8:36) ☐ I am currently using it, question does not apply to me.

- (8:37) ☐ a. Hard to get
- (8:38) ☐ b. Concerned about possible psychological damage
- (8:39) ☐ c. Concerned about possible physical damage
- (8:40) ☐ d. Concerned about getting arrested
- (8:41) ☐ e. Concerned about becoming addicted to marijuana
- (8:42) ☐ f. It's against my beliefs
- (8:43) ☐ g. Concerned about loss of energy or ambition
- (8:44) ☐ h. Concerned about possible loss of control of myself
- (8:45) ☐ i. It might lead to stronger drugs.
- (8:46) ☐ j. Not enjoyable
- (8:47) ☐ k. My parents would disapprove
- (8:48) ☐ l. My wife or girlfriend would disapprove
- (8:49) ☐ m. I don't like being with the people who use it
- (8:50) ☐ n. My friends don't use it
- (8:51) ☐ o. I might have a bad trip
- (8:52) ☐ p. Other (please specify) _____

H48. Which of the following best describes your parents' (or guardians') cigarette use during the time you were growing up?

(8:53)

A. Mother . . .

- ☐ (1) Never smoked cigarettes
- ☐ (2) Smoked only occasionally
- ☐ (3) Was a regular smoker, but quit
- ☐ (4) Was a regular smoker
- ☐ (5) Doesn't apply or don't know

(8:54)

B. Father . . .

- ☐ (1) Never smoked cigarettes
- ☐ (2) Smoked only occasionally
- ☐ (3) Was a regular smoker, but quit
- ☐ (4) Was a regular smoker
- ☐ (5) Doesn't apply or don't know

H49. How would you describe your parents' use of alcohol during the time you were growing up?

(8:55)

A. Mother . . .

- ☐ (1) Never drank
- ☐ (2) Light drinker
- ☐ (3) Moderate drinker
- ☐ (4) Heavy drinker
- ☐ (5) Doesn't apply or don't know

(8:56)

B. Father . . .

- ☐ (1) Never drank
- ☐ (2) Light drinker
- ☐ (3) Moderate drinker
- ☐ (4) Heavy drinker
- ☐ (5) Doesn't apply or don't know

H50. During the time you were growing up, how often did either of your parents use the kinds of pills we now call uppers or downers (for example, sleeping pills, tranquilizers, amphetamines, or barbiturates)?

(8:57)

A. Mother used them . . .

- ☐ (1) Never
- ☐ (2) Almost never
- ☐ (3) Sometimes
- ☐ (4) Often
- ☐ (5) Doesn't apply or don't know

(8:58)

B. Father used them . . .

- ☐ (1) Never
- ☐ (2) Almost never
- ☐ (3) Sometimes
- ☐ (4) Often
- ☐ (5) Doesn't apply or don't know

SECTION J

We'd like to ask you a few questions about your current and future family plans.

- (9:21) J1. What is your marital status?
- ☐ (1) Single → GO TO QUESTION J2
 - ☐ (2) Married with one or more children → GO TO QUESTION J4
 - ☐ (3) Married with no children → GO TO QUESTION J8
 - ☐ (4) Divorced or separated with one or more children → GO TO QUESTION J4
 - ☐ (5) Divorced or separated with no children → GO TO QUESTION J8

FOR THOSE WHO ARE SINGLE:

- (9:22) J2. When do you think you are most likely to get married?

- ☐ (1) Within the next year or so
- ☐ (2) In 2 - 3 years
- ☐ (3) In 4 - 5 years
- ☐ (4) Over 5 years from now
- ☐ (5) I don't expect to get married

- (9:23) J3. How long after getting married do you think a couple should wait before trying to have their first child?

- ☐ (1) Shouldn't wait at all
- ☐ (2) One year
- ☐ (3) Two years
- ☐ (4) Three years
- ☐ (5) Four or five years
- ☐ (6) Over five years

GO TO QUESTION J12

FOR THOSE WHO HAVE ONE OR MORE CHILDREN:

- (9:24) J4. How many children do you have?

- ☐ (1) One
- ☐ (2) Two
- ☐ (3) Three
- ☐ (4) Four or more

- (9:25) J5. What is the sex of your first child?

- ☐ (1) Male
- ☐ (2) Female

- (9:26-29) J6. When was your child born?

_____, _____
MONTH

_____, _____
YEAR

(9:30) J7. Did you and your wife plan on having your first child at that time?

- ☐ (1) Yes, we were trying to have a child
☐ (2) No, we were trying to avoid a pregnancy at that time
☐ (3) We weren't trying either way

GO TO QUESTION J10

FOR THOSE WHO ARE MARRIED, SEPARATED, OR DIVORCED WITH NO CHILDREN:

(9:31) J8. Is your wife currently expecting a child?

- ☐ (1) Yes
☐ (2) No

(9:32-33)

J8a. When is the baby expected? _____ MONTH

(9:34)

J8b. Did you and your wife plan this pregnancy?

- ☐ (1) Yes, we were trying to have a child
☐ (2) No, we were trying to avoid a pregnancy at the time
☐ (3) We weren't trying either way

GO TO QUESTION J10

(9:35) J9. When do you think you're most likely to have your first child?

- ☐ (1) We're trying to have a baby now
☐ (2) About one year or so from now
☐ (3) About two years from now
☐ (4) About three or four years from now
☐ (5) Five or more years from now
☐ (6) Never
☐ (7) Doesn't apply to me

FOR ALL WHO ARE MARRIED, SEPARATED, OR DIVORCED:

J10. Did you decide to delay having a first child for any of the following reasons?
 (CHECK ALL THAT APPLY)

- (9:36) ☐ a. No, we didn't decide to delay a first child
 (9:37) ☐ b. Yes, because we couldn't afford to have a child
 (9:38) ☐ c. Yes, because I wanted to finish my education
 (9:39) ☐ d. Yes, because my wife wanted to finish her education
 (9:40) ☐ e. Yes, because my wife was interested in developing her career
 (9:41) ☐ f. Yes, because we wanted to get to know each other before we had a child
 (9:42) ☐ g. Yes, because we wanted to enjoy our life together before being tied down by a child

(9:43-46) J11. When did you get married? _____, _____
MONTH YEAR

THE NEXT QUESTIONS ARE FOR EVERYONE. THEY ASK ABOUT HAVING CHILDREN.

(9:47) J12. Have you thought at all about whether you'd like to have children or how many you'd like to have?

- ☐ (1) I've thought about it a lot
☐ (2) I've thought about it a little
☐ (3) I have not thought about it at all

(9:48) J13. Have you talked with anyone, such as your parents, friends, or wife about how many children to have?

- ☐ (1) Yes
☐ (2) No

(9:49) J14. What is the *largest* number of children you would choose to have?

_____ children
 NUMBER

(9:50) J15. How certain do you feel that this is the largest number of children you would choose to have?

- ☐ (1) Quite certain or sure
☐ (2) Moderately certain
☐ (3) Not at all certain

(9:51) J16. What is the *smallest* number of children you would choose to have?

_____ children
 NUMBER

(9:52) J17. How certain do you feel that this is the smallest number of children you would choose to have?

- ☐ (1) Quite certain or sure
☐ (2) Moderately certain
☐ (3) Not at all certain

People have different reasons for wanting a certain number of children. Please read each reason below and check how important it is in *your own thinking* about how many children to have.

Don't just check VERY IMPORTANT for everything. Try to think what things really matter to you, and what things really aren't that important.

How important is this for you?

Very important	Pretty important	A little important	Not important
(1)	(2)	(3)	(4)

- | | | | | | | |
|--------|------|---|--------------------------|--------------------------|--------------------------|--------------------------|
| (9:53) | J18. | I want a family -- at least one child. | ☐ | ☐ | ☐ | ☐ |
| (9:54) | J19. | I want more than one child because an only child is likely to be spoiled. | ☐ | ☐ | ☐ | ☐ |
| (9:55) | J20. | I want at least one boy and one girl. | ☐ | ☐ | ☐ | ☐ |
| (9:56) | J21. | Having more children means they can get more companionship and help from each other. | ☐ | ☐ | ☐ | ☐ |
| (9:57) | J22. | Having fewer children helps avoid overpopulation. | ☐ | ☐ | ☐ | ☐ |
| (9:58) | J23. | Having fewer children means a better life together for the husband and wife. | ☐ | ☐ | ☐ | ☐ |
| (9:59) | J24. | Having fewer children means each child gets more love and attention from the parents. | ☐ | ☐ | ☐ | ☐ |
| (9:60) | J25. | Having children costs a lot of money. | ☐ | ☐ | ☐ | ☐ |

- (9:61) J26. All things considered, if you could have exactly the number of children you want, what number would that be? (GIVE A SINGLE NUMBER)

_____ children
NUMBER

- (9:62) J26a. How many boys? _____ boy(s)
NUMBER

- (9:63) J26b. How many girls? _____ girl(s)
NUMBER

This section presents a number of important issues. Some of the issues are controversial, so if you find particular questions which you would rather not answer, just leave them blank and go on with the rest.

We would like you to indicate whether you agree or disagree with each statement.

(CHECK ONE BOX ON EACH LINE)

		Agree (1)	Mostly agree (2)	Mostly disagree (3)	Disagree (4)
(9:64)	J27. High schools should offer instruction in birth control methods.	☐	☐	☐	☐
(9:65)	J28. A woman should be permitted to have an abortion at any time during the first three months of pregnancy.	☐	☐	☐	☐
(9:66)	J29. A couple should have as many children as they want, without worrying about increasing population.	☐	☐	☐	☐
(9:67)	J30. There is no danger of overpopulation becoming a serious problem in the United States.	☐	☐	☐	☐
(9:68)	J31. To prevent overpopulation, each couple has a responsibility to limit the number of children they have.	☐	☐	☐	☐
(9:69)	J32. I feel strongly enough about preventing overpopulation that I'd be willing to limit my family to two children.	☐	☐	☐	☐
(9:70)	J33. Turning now to a more general issue, what do you think would be the ideal population size for the United States?				
	☐ (1) Much smaller than it is now				
	☐ (2) Somewhat smaller than it is now				
	☐ (3) About the same as it is now				
	☐ (4) Somewhat larger than it is now				
	☐ (5) Much larger than it is now				
(9:71)	J34. What do you think would be the ideal population size for the entire world?				
	☐ (1) Much smaller than it is now				
	☐ (2) Somewhat smaller than it is now				
	☐ (3) About the same as it is now				
	☐ (4) Somewhat larger than it is now				
	☐ (5) Much larger than it is now				

When you have completed the questionnaire, just place it in the postage-paid envelope and mail it.

Your check for \$10.00 will be mailed to you when we receive your questionnaire.

THANKS VERY MUCH FOR YOUR HELP

YOUTH IN TRANSITION
Field Office
Survey Research Center
Institute for Social Research
The University of Michigan
Ann Arbor, Michigan 48106

APPENDIX I

References

- Abelson, H. I., & Atkinson, R. B. Public experience with psychoactive substances. Princeton, N.J: Response Analysis Corporation, 1975.
- Ammons, R. B., & Ammons, C. H. The Quick Test (QT): Provisional manual. Psychological Reports, 1962, 11, 111-161, (Monograph Supplement I-VII.)
- Astin, A. W. Predicting academic performance in college. New York: Free Press, 1971.
- Atkinson, J. W. An introduction to motivation. Princeton, N.J.: Van Nostrand, 1964.
- Bachman, J. G. Youth in Transition: Volume II -- The impact of family background and intelligence on tenth-grade boys. Ann Arbor: Institute for Social Research, 1970.
- Bachman, J. G. Anti-dropout campaign and other misanthropies. Social Science and Modern Society (Trans/action), 1972, 9(5), 4-5.
- Bachman, J. G. & Blair, J. "Citizen Force" or "Career Force"? Implications for ideology in the all-volunteer army. Armed Forces and Society, 1975, 2, 81-96. (a)
- Bachman, J. G. & Blair, J. Soldiers, sailors, & civilians: The "military mind" and the all-volunteer force. (Final report) Ann Arbor: Institute for Social Research, 1975. (b)

- Bachman, J. G., Green, S., & Wirtanen, I. D. Youth in Transition: Volume III -- dropping out -- problem or symptom? Ann Arbor: Institute for Social Research, 1971.
- Bachman, J. G., & Jennings, M. K. The impact of Vietnam on trust in the government. Journal of Social Issues, 1975, 31, 141-155.
- Bachman, J. G., Kahn, R. L., Mednick, M. T., Davidson, T. N., & Johnston, L. D. Youth in Transition: Volume I -- Blueprint for a longitudinal study of adolescent boys. Ann Arbor: Institute for Social Research, 1967.
- Bachman, J. G., & Van Duinen, E. Youth look at national problems. Ann Arbor: Institute for Social Research, 1971.
- Brown, G. H. Demographic pressures for change. Economic Outlook USA, 1976, 3(2), 30-31.
- Cameron, C., Quinn, R. P., Beehr, T. A., & Gupta, N. Effectiveness in work roles report 1: Validating quality of employment indicators. Ann Arbor: Survey Research Center, 1974. (NTIS Doc. No. 92-26-72-35-1)
- Campbell, A. White attitudes toward black people. Ann Arbor: Institute for Social Research, 1971.
- Campbell, A., & Schuman, H. Racial attitudes in fifteen American cities. Ann Arbor: Institute for Social Research, 1968.
- Census Bureau (U.S.), Current Population Reports, Series P-20, No. 271, Marital status and living arrangements. Washington, D.C.: U.S. Government Printing Office, 1974. (a)

- Census Bureau (U.S.), Current Population Reports, Series P-20, No. 274, Educational attainment in the United States: March 1973 and 1974. Washington, D.C.: U.S. Government Printing Office, 1974. (b)
- Cobb, S., Brooks, G. H., Kasl, S. V., & Connelly, W. E. The health of people changing jobs: A description of a longitudinal study. American Journal of Public Health, 1966, 56, 1476-1481.
- Coleman, J. S. Regression analysis for the comparison of school and home effects. Social Science Research, 1976, 5, 1-20.
- Coopersmith, S. The antecedents of self-esteem. San Francisco: W.H. Freeman and Company, 1967.
- Douvan, E., & Gold, M. G. Modal patterns in American adolescence. In L. W. Hoffman & M. L. Hoffman (Eds.), Review of child development research. New York: Russell Sage Foundation, 1966.
- Duncan, O. D. A socioeconomic index for all occupations, and properties and characteristics of the socioeconomic index. In A. J. Reiss, Jr. (Ed.), Occupations and social status. New York: The Free Press, 1961.
- Feldman, K. & Newcomb, T. M. The impact of college on students. (2 vols.). San Francisco: Jossey-Bass, 1969.
- French, J. R. P., Jr. & Kahn, R. L. A programmatic approach to studying the industrial environment and mental health. Journal of Social Issues, 1962, 18(3), 1-47.

- Gates, A. I. Gates Reading Survey-Form 1. New York: Teachers College, Columbia University, 1958.
- Gergen, K. J. The concept of self. New York: Holt, Rinehart, & Winston, 1971.
- Gold, M. Undetected delinquent behavior. Journal of Research in Crime and Delinquency, 1966, 3, 27-46.
- Gold, M. Delinquent behavior in an American city. Belmont, Calif.: Brooks/Cole, 1970.
- Haberman, P. W., Josephson, E., Zanes, H., & Elinson, J. High school drug behavior: A methodological report on pilot studies. In S. Einstein and S. Allen (Eds.) Student drug surveys. Farmingdale, N.Y.: Baywood, 1972.
- Hause, J. C. Ability and schooling as determinants of lifetime earnings, or if you're so smart, why aren't you rich? In F. T. Juster (Ed.), Education, income, and human behavior. New York: McGraw-Hill, 1975.
- Heise, D. R. Separating reliability and stability in test-retest correlation. American Sociological Review, 1969, 34, 93-101.
- Jencks, C., & associates. Inequality. New York: Harper Colophon, 1972.
- Johnston, J., & Bachman, J. G. The transition from high school to work: The work attitudes and early occupational experiences of young men. Ann Arbor: Institute for Social Research, November, 1973. (NTIS NO. 225938/AS)

- Johnston, L. D. Drugs and American youth. Ann Arbor: Institute for Social Research, 1973.
- Johnston, L. D., O'Malley, P. M., & Eveland, L. Non-addictive drug use and delinquency: A longitudinal analysis. In Drug use and crime: Report of the panel on drug use and criminal behavior. Washington, D.C.: The National Institute on Drug Abuse. (in press).
- Juster, F. T. Introduction. In F. T. Juster (Ed.), Education, income, and human behavior. New York: McGraw-Hill, 1975.
- Kaufman, H. G. Relations between unemployment-reemployment experience and self-esteem among professionals. Proceedings of the 81st Annual Convention of the American Psychological Association, 1973, 8, 601-602.
- Kish, L. Confidence intervals for clustered samples. American Sociological Review, 1957, 22, 154-165.
- Kish, L. & Frankel, M. R. Balanced repeated replication for standard errors. Journal of the American Statistical Association, 1970, 65, 1071-1094.
- Kohen, A. I. Determinants of labor market success among young men: Race, ability, quantity and quality of schooling. Columbus, Ohio: The Ohio State University Center for Human Resource Research, 1973.
- Kohn, M. L. Class and conformity: A study in values. Homewood, Illinois: Dorsey Press, 1969.

- Leutgert, M. J. & Armstrong, A. H. Methodological issues in drug usage surveys: Anonymity, recency, and frequency. International Journal of the Addictions, 1973, 8, 683-689.
- Luck, P. W., & Heiss, J. Social determinants of self-esteem in adult males. Sociology and Social Research, 1972, 57, 69-84.
- Miller, A. H. Political issues and trust in government: 1964-1970. American Political Science Review, 1974, 68, 941-972.
- Miller, A. H., Brown, T. A., & Raine, A. S. Social conflict and political estrangement: 1958-1972. Paper presented at the meeting of the Midwest Political Science Association, April 1973.
- Morgan, J. N., Dickinson, K., Dickinson, J., Benus, J., & Duncan, G. One thousand American families -- Patterns of economic progress: Volume I, analyses of the first five years. Ann Arbor: Institute for Social Research, 1974.
- Morgan, J. N., & Duncan, G. A panel study of income dynamics: Procedures and tape codes. 1975 interviewing year, Wave VIII, A supplement. Ann Arbor: Institute for Social Research, 1975.
- O'Donnell, J. A., Voss, H. L., Clayton, R. R., Slatin, G. T., & Room, R. G. W. Young men and drugs: A nationwide survey. National Institute on Drug Abuse Research Monograph 5, 1976. (NTIS No. PB 247-446)
- Offer, D., & Offer, J. B. From teenage to young manhood. New York: Basic Books, 1975.

- Petzel, T. P., Johnson, J. E., & McKillip, J. Response bias in drug surveys. Journal of Consulting and Clinical Psychology, 1973, 40, 437-439.
- Purkey, W. W. Self concept and school achievement. New Jersey: Prentice-Hall, 1970.
- Quinn, R. P., Staines, G. L., & McCullough, M. R. Job satisfaction: Is there a trend? Manpower Research Monograph No. 30. Washington: U.S. Government Printing Office, 1974. (Doc. No. 2900-00195)
- Quinn, R. P., and Mandelovitch, S. B. Education and job satisfaction: A questionable payoff. Ann Arbor: Institute for Social Research, 1975.
- Robinson, J. P., & Shaver, P. R. Measures of social psychological attitudes (Rev. ed.). Ann Arbor: Institute for Social Research, 1973.
- Rosenberg, M. Society and the adolescent self-image. Princeton: University Press, 1965.
- Rosenberg, M., & Simmons, R. G. Black and white self-esteem: The urban school child. Washington: Rose Monograph Series, American Sociological Association, 1971.
- Sewell, W. H., & Hlauser, R. M. Education, occupation, and earnings: Achievement in the early career. New York: Academic Press, 1975.
- Spaeth, J. L. Characteristics of the work setting and the job as determinants of income. In Sewell, W. H., Hauser, R. M., & Featherman, D. L. (Eds.), Schooling and achievement in American society. New York: Academic Press, 1976.

- Symonds, P. M. From adolescent to adult. New York: Columbia University Press, 1961.
- Tinklenberg, J. Assessing the effects of drug use on antisocial behavior. The Annals of the American Academy of Political and Social Science, 1975, 417, 66-75.
- Wainer, J. Estimating coefficients in linear models: It don't make no nevermind. Psychological Bulletin, 1976, 83, 213-217.
- Weidman, J. C., Phelam, W. T., & Sullivan, M. A. The influence of educational attainment on self-evaluations of competence. Sociology of Education, 1972, 45, 303-312.
- Withey, S. B. A degree and what else? New York: McGraw-Hill, 1971.
- Wylie, R. C. The self-concept: A critical survey of pertinent research literature. Lincoln, Nebraska: University of Nebraska Press, 1961.
- Wylie, R. C. The self-concept. (Rev. ed., Vol. 1). Lincoln, Nebraska: University of Nebraska Press, 1974.
- Yankelovich, D. Youth and the establishment. New York: JDR 3rd Fund, 1971.
- Yankelovich, D. The new morality: A profile of American youth in the 70's. New York: McGraw-Hill, 1974.